THE

MARYLAND FARMER:

DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

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THE DEPREDATIONS OF DOGS UPON SHEEP.

Many of the Western States annoyed and injured by the ravages of the worthless dogs allowed to live and increase within their borders, have passed stringent laws in order to restrain this growing evil. The laws themselves, though it is impossible to make them perfect enough to be wholly effectual, yet would be partially so if some means were provided for their more vigorous enforcement as they stand, they are, as far as any general and permanent good is concerned, a dead letter upon the statute book in the very portions of the States, most needing their protection.

A bill recently introduced in the Legislature of Illinois, gives the salient points of the regulations usually adopted. It enacts that:

"Every owner of a dog, shall on or before the 1st of September procure from the Town Clerk, and cause to be worn a collar for each dog he shall own; the clerk to keep a record and description of all dogs, for which collars are obtained with the names of their owners. For each dog registered, he is to be paid a fee of one dollar, any dog not wearing a collar and registered is to be considered as abandoned, and it shall be lawful for any person to slay such animal as though he were wild. The assessors shall procure lists of all registered dogs, and shall also make return of all abandoned dogs, with the names of the persons who harbor them. A tax of one dollar shall be paid for each registered male, and a tax of two dollars for each registered female dog. Owners of dogs are made liable for all injuries the latter may inflict, any person may kill a dog which makes a sudden assault upon him outside of the enclosure of its owner or keeper, and any person may kill a dog found out of the immediate control of its keeper, worrying, wounding or killing any domestic animal. We are not at present informed whether the above bill is now a law or not, but we hope the members of the Illinois Legislature were sensible enough to pass either this or some proper statute of the kind."

There was at one time a statute similar to the above in Iowa, probably other Western and Northern States have passed laws of the same nature for the same purpose. In Maryland we have no general laws of the kind, except to sections of the code which as they are short and we purpose to make some comment on them, we give:

SEC. 1. "If any dog shall be detected in killing or injuring sheep, and proof thereof shall be made by the oath of the owner of said sheep, or any other person being a competent witness before a Justice of the Peace, the owner of said dog upon complaint to him made and information of such proof shall proceed forthwith to kill said dog, and on his refusal or neglect to do so, the owner of said sheep may kill said dog afterwards found running at large, or may apply to a constable who, upon the production of the aforesaid affidavit, shall proceed to the house of the owner of said dog, and kill said dog there or wherever else found."

SEC. 2. If such dog shall immediately upon such complaint and information be killed by his owner, the owner of the sheep shall not have cause of action against the owner of said dog, but upon his refusal to kill said dog, the owner of the sheep may recover double the value of the sheep killed with costs, in the manner prescribed for the recovery of debts. There are also local statutes in the code applicable to Harford and Cecil counties, and to some of the county towns other than the sections cited; but the largest and wealthiest portion of our State has to rely entirely whatever the value of the sheep may be, upon the statute quoted for protection against depredations upon their sheep fold of dogs allowed to roam through the neighborhood unrestrained. This should be no longer permitted. If we are to have any law at all upon the subject, it

should at least be one that is capable of being put into practice with some hope of effect. The present enactment is the merest farce; we doubt if action was ever taken under its provision. We feel certain that no debt for injury to sheep has ever been satisfied. If there is any law in our code, with the possible exception, for which there is other authority, of the forbidding a man to marry his grandmother, less likely to be of use, we have the 87th article of the Maryland Code of General Laws with reference to "sheep," would much more clearly set forth its practical bearing if it were headed "a law for the protection of dogs, and for more effectually spreading ill-will between neighbor and neighbor if they are interfered with!" It is perhaps fortunate that it is hardly possible to carry out this law. In the first place, the depredations among the sheep are, with the rarest exceptions, committed at night, and are concealed by the darkness. The perpetrator, in ninety-nine cases out of a hundred, though he may be suspected, cannot be sufficiently distinguished to justify the owner of the sheep, or any other witness, in taking the required oath. Even if the injury were done in broad daylight, it would be often impossible to identify the dog with the requisite clearness, so as to rebut the testimony of the owner of that dog, who in most cases would hotly defend his property. Further than this, the feuds that would ensue would be innumerable. If the owner of the sheep acted upon that clause of the law which justifies him in despatching a sheep-killing dog, if found at large, or to call in the aid of the constable to destroy it, the matter would only be made worse.

It is true that Maryland is not at present, to any great extent, a sheep raising State. Considering, however, the duty which has been put upon wool, and the profits made during and immediately after the late war, it has been to her disadvantage that, with great facilities for wool growing, her attention was not given to it earlier. We have already some extremely fine imported flocks, and a considerable number of the more common kinds. To what extent under more favorable circumstances, the raising of sheep could be profitably carried on in this State, it would be difficult to estimate. There should, at least, be afforded to it such protection as would seriously diminish the chances of failure to any one desiring to undertake wool growing.

That the injury from the depredations of dogs is no inconsiderable item to be taken into account in such a case, is shown by the statistics published in the Report of the Agricultural Department for 1868, as set forth below.

The money value of the losses by dogs in 1866, are put by the Department at two millions, six hundred thousand dollars.

	No. of Counties Reported.	No. of Sheep Killed.		No. of Counties Reported.	No. of Sheep Killed.
Maine,	8		Texas,	16	7360
New Hampshire	6		Arkansas,	9	770
Vermont,	5		Tennessee,	25	12478
Massachusetts,	5		West Virginia	15	1475
Rhode Island,	2		Kentucky,	26	8292
Connecticut,	3		Missouri,	36	8267
New York,	25		Illinois,	60	16167
New Jersey,	6		Indiana,	33	7189
Pennsylvania,	28		Ohio,	31	13532
Delaware,	2		Michigan,	18	4058
Maryland,	5		Wisconsin,	26	2237
Virginia,	17		Minnesota,	8	518
North Carolina.	24		Iowa,	35	4660
South Carolina,	7		Kansas,	13	2212
Georgia,	18		Nebraska,	3	125
Florida,	2		Utah,	2	14
Alabama,	11				
Mississipi,	9		Total.	539	130,427
Louisiana,	3				

Selecting Seed Wheat.

The *American Rural Home* gives the following seasonable hints in relation to selecting pure seed wheat, which, if yearly carried out, would result in the improvement instead of deterioration of varieties:

Rarely do we see, as this year, wheat shooting into head in May. There has not been rain enough for this crop, and many fields will yield short straw. But it stands thick on the ground. Almost every field has some rye in: we are now cutting it out. The varieties are not pure, and a sample of clean Diehl wheat would be difficult to find. Farmers lose a great deal by growing a crop of mixed varieties. A sample of pure Diehl grown on good wheat soil, and having a uniform white berry, will bring twenty-five cents per bushel more than one in which one-tenth is red wheat. Every wheat-grower should make an effort to secure pure seed, and this can only be done by selection. Let him go over his fields before cutting, and glean the earliest, largest and most perfect ears, as a stock from which to grow seed. A few quarts gathered in this way and sown, will in two or three years yield enough seed for his own use. For immediate use, the best plan is to go over an acre or two when the wheat begins to turn, and cull out all intruding varieties. A few days spent at this work will secure enough comparatively pure seed the next year. Millions of dollars might be added to the value of the wheat crop of the United States, by a little timely work and care in thus selecting seed.—*Country Gentleman.*

ONIONS DEATH TO LICE.—Asa Baldwin, Chatauqua county, New York, says that fifty years ago a very lousy cow of his ate ten or twelve onions and in fifteen hours afterward the lice had disappeared. He has tried the same remedy many times since, with the same result in each case.

THE CULTURE OF THE STRAWBERRY.

The strawberry has long been the favorite among all our smaller fruits. It maintains this position not only because it is the earliest spring delicacy of the berry kind, but also because its slight acidity is peculiarly greatful, refreshing and healthy. The human system after the long deprivation of winter, craves something with a trace of sourness in its composition. No artificial aids will answer this need; the natural taste of the strawberry in a great measure does. Its popularity is well deserved, and its cultivation has increased rapidly within the last few years. In spite, too, of the large quantities annually raised the price in the Baltimore markets was good throughout most of the season. This is due to three principal causes—a wider demand among private consumers, the demand creating by the packing houses, and the cargoes sent to other cities. The quantity canned during the latter part of the strawberry season is very great, and our present rapid means of transportation brings New York and Philadelphia near enough for growers to ship to them no unconsiderable portion of their crop.

This fact renders the cultivation of the strawberry, properly conducted, remunerative in the vicinity of the city, as well as in the counties near enough to reach our markets. Owners of a few acres can only make them profitable by some industry of this kind. That from five to fifteen acres can be made to pay by growing small fruits and early vegetables, the experience of others has tested and proved. Many of our frugal and industrial German population, in some cases possessors, many only renters of a very limited area of land, succeeded admirably as market gardeners, an occupation which, though requiring considerable skill, is not as profitable as small fruit raising.

The conditions under which the strawberries can be grown are few. It can be matured in greater or less perfection in nearly every State. It varies nevertheless very much under the influence of climate. Even in the same locality, the quantity as well as the quality, will differ greatly according to the character of the season. If the weather is unfavorable while the plants are in flower, there will be a deficiency in the crop; if while the fruit is on the vine there will be a deterioration in the flavor. It is always very sensitive to wet, and cold rainy springs are a drawback to its cultivation.

Taking it, however, with all its liability to failure from various causes admitted, we, in the Middle States, are most advantageously situated for growing it at a profit. Here it seems to find the temperature best suited to its properly maturing. If grown further north the berry is apt to be acid; if further south, it is often insipid and watery. In our latitude it also comes into bearing early, and the season generally lasts long. This early maturing enables us to forestall the later crop, and obtain the highest prices.

The preparation of the ground for strawberry beds demands close and personal attention. The soil should be finely pulverized to the depth of at least sixteen inches, and even deeper if heavy with clay. *Well rotted* stable manure should be worked in to within about six inches of the surface. *Manure that is fresh should never be used*, unless the trenching is done in the fall, with the intention of planting the following spring. If any top dressing is given, one of woods' earth and ashes is decidedly the best. The soil itself should be well drained, warm, and slightly limed. Even clayey land, such as suits the foreign varieties, should at the same time be made thoroughly loose and light.

All runners and weeds must be scrupulously removed as they appear, and the ground kept absolutely clean. If this is done by the hoe it should be used very carefully, as the less stirring of the soil between the fall, when the roots begin to form, and the time when the crop is ready for gathering, the better. It is always of benefit, also, through the season to protect the vines by a light covering of some kind. Straw is good as a mulch for this purpose; new hay is perhaps the best. Any kind of light material will do, if it be free from either the seeds natural to it, or those of weeds which have become mingled with it. Whatever the nature of the covering may be, a mulch of some kind must be given to the strawberry bed by any one who wishes to raise good crops. Without its protection it will be of little use to attempt to produce this fruit in sufficient quantities and of so fine a flavor as to pay any great surplus over the expenses necessary to cultivate and market it.

WILL LIME DESTROY SORREL?—Not always and not generally. Many people otherwise. The theory is that sorrel naturally grows in sour soil, and as the lime has a tendency to sweeten the land, the pest will disappear. Sorrel, we doubt not, is most frequently to be found growing in sour soil, but we know that it makes its appearance almost upon any soil that has been for some time uncultivated. We also know that lime is not always a remedy for it. In several instances where lime has been applied liberally it has failed to make an impression upon it. If any of our farmers have experience in this matter we shall be obliged to them to communicate it for our columns. All thess matters are advantageous in some degree to the practical farmer, and should be make known.—*Germantown Telegraph.*

Our Agricultural Calendar.

FARM WORK FOR AUGUST.

We have but few observations to make in respect to the work for this month, in view of the fact that it is partly a cleansing up month, and partly preparatory. But may say to those who adopt the Pennsylvania practice of giving two ploughings to the ground intended for wheat—except where clover is to be ploughed in—that the earlier the first ploughing is given the better will be the condition of the soil when the time for seeding arrives. Another remark may be properly made in this place, and that is in respect to the proper time for seeding to wheat in this latitude. It is quite a general custom to seed somewhere about the first week in October; but we think since the fly has to a good extent disappeared, an early seeding will be found preferable—say not later than the 23d of September. Of course much depends on the season, and the condition of the soil. If these are favorable, the wheat gets by early seeding a better stand and a firmer hold on the soil, than if seeded later. In respect to rye it is especially desirable to seed early.

One more point. In entering upon the work for the next year, we cannot help impressing upon our friends the great advantages to be derived from thorough preparation, and an adaptation—as far as possible—of the crop to the soil. We repeat also, as we have often said before, that no more land ought to be cropped than can be put into the best condition—taking into consideration the means of the farmer—and that the labor of the farm should be concentrated upon only that number of acres which it can most efficiently control. The work for the month is as follows:

Fall Turnips.

Turnips for fall use ought not be seeded later than the first week in August. If the season is rainy, they may be seeded to advantage a week earlier. Everything, however, depends upon that. It is useless to seed turnips in the midst of a protracted drought, but seize the first opportunity that the soil is in good condition, and put in the crop.

The Soil and its Preparation.—The best soil for the turnip is a rich, deep, sandy loam. The next best is a micacious or rotten rock soil. Indeed the the latter is excellent if, as often happens, it abounds in potash rendered soluble by the disintegration of the rock, and the action of winter frosts and summer rains. But, whatever the soil, it ought to be plowed deep—the deeper the better—should be free of weeds or clods, and brought to the finest condition of tilth by thorough pulverization.

Manures.—The turnip is a quick grower, and occupying the land but a short time, requires easy access to soluble food adapted to its wants. Either of the following mixtures will serve for an acre of turnips:

No. 1.—Twenty two-horse loads of well rotted stable or barnyard manure—one-half ploughed in eight inches deep, and the other half four inches deep; as a top-dressing, apply subsequently five bushels of finely ground bone dust, one bushel of plaster, and ten bushels of wood ashes, mixed and broadcasted.

No. 2.—Two hundred and fifty pounds of super-phosphate of lime, either pure or ammoniated, the latter being preferred; ten bushels of ashes, and one bushel of plaster.

No 3.—A compost made at least two weeks beforehand of five two-horse loads of well rotted stable manure; ten of marsh mud or woods' earth; one hundred pounds of super-phosphate, and ten bushels of wood ashes; mix and apply.

Method of Seeding.—It is a general custom to sow turnip seed broadcast, but the better way is to seed in drills. The crop will be larger, is more easily kept clean, and the land is left in a better condition. In case of seeding in drills, one-half the manure should be applied directly to the drill, and the other half broadcast, and the subsequent ploughing after the crop is drawn should be thorough, or more manure should be applied in the intervals between the drills, so as to make the manuring uniform.

After Culture.—As soon as the plants come up dust them with a mixture of wood ashes and soot, to which salt may be added. This work should be done when the dew is on of a morning. When the plants begin to make bulbs, eradicate all weeds, thin out where the plants stand too thickly, and with the hoe in broadcast seeding, or with the cultivator if drilled, keep the soil constantly loose and light and clean through the growing season.

Seeding of Rye.

The best time for seeding rye is during this month, and not later than the last week of the month.

COMPOSTS FOR RYE.

No. 1.—Ten loads of woods' mould, five two-horse loads of rich and well rotted stable manure, five bushels of unleached wood ashes—make a compost of these, and let the materials lie in the heap for ten days before using, then mix, cart out and spread broadcast.

No. 2.—Ten two-horse loads of wood's mould, or marsh mud; ten bushels of wood ashes, and one hundred and fifty pounds of super-phosphate.

No. 3.—Five two-horse cart loads of woods' earth, two hundred pounds of ammoniated phosphate, five bushels of wood ashes.

Preparation of the Soil.—Plow deeply, and make the soil as light as possible.

Quantity of Seed to the Acre.—Sow from one bushel to a bushel and a half of seed to the acre. The latter quantity is to be preferred.

Setting a Timothy Meadow.

No land should be laid down to grass unless the soil is naturally a fertile alluvial, or has been made so by high manuring. It is also essential in the case of timothy that the soil should contain a considerable admixture of clay, and that whilst it ought not to be wet, it should be cool and moist and well drained.

As to Manures —In case the soil requires help, the best fertilizers for producing heavy crops of grass are wood ashes and bone dust, or, in other words, phosphates. These should be applied at the rate of fifty bushels of unleached wood ashes to the acre, or their equivalent in the crude potash of commerce, and two hundred pounds of super-phosphate. Where pasture and not marketable timothy hay is desired, an admixture of grass seed may be used to advantage. In this case it is better to omit timothy, as ripening late and giving no aftermath, and resort to orchard grass, one bushel—Kentucky blue grass, one-half bushel——red top, one-half bushel—perennial rye grass, one-half bushel, with three pounds of sweet scented vernal grass seed. The soil for such a meadow may be of a lighter texture than that required for timothy; but care should be taken to moisten the orchard grass and Kentucky blue grass seeds for a few hours before seeding. Then mix all together with wood ashes, and sow when the soil is not too dry.

Fall Potatoes.

Keep these free of weeds and grass; keep the soil well stirred between the rows, and earth up the vines.

Granaries.

Wash these with hot lye, and then white-wash them thoroughly. Fumigate them with sulphur if necessary.

Poultry Houses.

Keep these clean; white-wash the walls and floors, and strew over the latter sand and wood ashes. Keep the nests clean, and change them frequently.

Fences.

Keep these in good repair.

Sheep.

Keep tar at the bottom of the troughs, with salt sprinkled over it, to protect the sheep from the fly that deposits its eggs in their nostrils.

Late Corn.

Keep the cultivators busy in the corn, and do not lay them by until tasseling commences, and the soil is perfectly light and free of weeds.

Briars and Weeds.

Root out, cut up and burn all briars and weeds.

Orchards.

Look to your orchards, as advised last month.

Wet Lands.

August is the best month for draining wet lands.

Fallowing for Wheat.

In fallowing for wheat plow deep; the deeper you plow, and the finer condition into which you get your land, the better prospect you will have of a good crop this season.

ADVANTAGES OF DRAINING.

Extract from a Lecture delivered be Dr. F. Gregory, Regent of the University delivered at Pekin, Illinois.

In the evening, Prof. Shattuck lectured on draining. He said the advantages of draining consist not only in removing water from the surface of the grounds, but to a considerable depth below, so that the air and other elements may be more freely admitted through the soil, by which means it became better pulverized and prepared to feed and sustain growing plants. When thorough draining was effected to the depth of three or four feet, an increase of heat, often as much as fifteen degress, would be secured. On such grounds the combined action of sunlight and greater porosity of soil will cause them to yield three inches in dew, thereby, to a considerable extent, protecting plants during protracted drouth, as well as from an excess of water after heavy rains.

The increased warmth, just mentioned, would often prove sufficient after corn is planted to insure germination, for corn would germinate in a well drained soil at fifty-five, while in a similar soil, underdrained, the temperature might remain below forty-five, when the corn would soon rot. By raising the temperature, then, ten degrees, which would be the sure result in wet soils after draining, whole fields of early planted crops might be saved, which otherwise would be lost.

It was further argued that when crops appeared uneven in different parts of the field or dry up and shrivel in a moderate drouth, it indicated a lack of drainage. The theory was also advanced that underdrainage increases the healthfuluess of our homes and greatly lessens the attacks of ague and malarious diseases; that it has been ascertained by carefully collected statistics that consumption decreases two-thirds by a thorough and systematic drainage of country formerly wet.

The cost of draining an acre with two-inch tile put down four feet deep in ditches forty feet apart, will be about fifty dollars. Would use three, four, or even larger tile, according to the quantity of water to be conveyed away. Two-inch tile laid four feet deep and forty feet apart, in a ditch one hundred and thirty-two rods long, would be ample to carry off all excess from subsoils not springy. Round tiles are best, because of the greater ease in laying and making better joints.—*Prairie Farmer.*

Garden Work for August.

The work in the Garden for the present month is as follows :

Turnips.—Up to the 10th of August turnips may be seeded, but it is better to have the crop down earlier. For the best mode of preparation and the best fertilizers, see Farm Work for this month.

Celery Beds.—See that the celery beds are prepared in the best manner, and when this is done set out your plants.

Setting out Cabbage Plants.—Cabbage plants for fall use should have been set out before this. If the work is not done, choose a moist day and do it at once. If the season continues dry, still set out the plants of an evening; water freely, and spade the plants till they strike root.

Cabbage.—Keep cabbage plants already planted free of weeds, and water abundantly in dry weather.

Asparagus Beds.—Clean off asparagus beds, fork over the bed, and top dress liberally with salt and wood ashes.

Spinach.—During the first and second weeks of the month, prepare a bed for spinach—make it very rich. Sow in drills for use in September and October. Towards the close of the month prepare another bed of the richest soil for early spring spinach. For this latter, sow spinach of the prickly variety.

Radishes.—Continue to sow radish seed of the turnip rooted variety, once a week during the month.

Small Salading.—Sow small salading to come in succession at intervals of a week.

Peas.—A few rows of peas may be sown in a shady part of the garden. They must be watered freely and often.

Beans.—Continue to plant beans. Beans for pickles should be planted towards the middle of the month. Hoe and water your climbing beans.

Lettuce.—Set out lettuce plants for heading, and sow a fresh bed for late use.

Endives.—Tie up to bleach such of the endive plants as are large enough.

Melons and Canteleupes.—Keep these clean, and water freely in dry weather.

Budding.—Cherries and plums may be budded this month, wherever the bark parts freely from the wood.

Watering.—Water all the growing plants in the garden often and regularly, choosing by preference the evening for this work, after the sun goes down.

Good for Hogs.—Hogs that are much confined, and cannot get to the earth, will frequently be benefited by having a little charcoal, soft brick bats or rotten wood thrown into them; and a trifling quantity of brimstone mixed in their food occasionally is an excellent thing.

NOTES AND COMMENTARIES.

BY PATUXENT PLANTER.

Lands in southern Maryland are destined in a few years to rival in price those in any part of the State. The variety of scenery, peculiar location, being bounded by the Washington Branch of the Baltimore and Ohio R. R., the Potomac and Patuxent rivers, with the Baltimore and Potomac Road running through the upper portion of Anne Arundel, and the centre of Prince George's and Charles counties—the natural fertility of the soil and ease with which they can be cultivated, must attract land buyers. The whole region is well wooded and heavy timber for ship building is found on the river-banks, and abounds in fine streams affording great water power for mills and manufacturing purposes. The soil is full of marl with stratus of pipe clay, and clay for the best of bricks. In different sections there are exhaustless banks of rich iron ore, and quarries of finest stone for buildings, culverts, etc. The locality and soil seem to suit peculiarly vines and fruit-bearing trees and shrubs. The day is not distant when the vine will cover its hills, and wine of the first quality, will be made in abundance and become a fruitful source of wealth to the inhabitants. It seems a land where the domestic animals thrive well with but little care bestowed by man. Even now, some of the best stock, including horses, cattle, sheep and hogs in the State, is to be found in the green pastures of these lower counties, many being first class premium animals. Prior to 1800, this was called "the rose-horse region" of America, and I should judge from the numbers of fruit trees planted and to be planted, as soon as the rail road and the turn-pikes (all nearly completed) are in working order, this will be designated as the *fruit and vegetable region* of the State. This country wants only to be seen and known, to secure in a short time an influx of population and investment of capital from abroad.

Dogs vs. Sheep.

"*Gloucester County, Va.*—In one neighborhood in this county, including three flocks of sheep, 35 per cent. were destroyed by dogs.

Augusta County, Va.—About three dogs to every sheep in this county. If our legislature would tax the dogs instead of the sheep, it would soon rid the county of a nuisance, and build up one of the most profitable branches of industry.

Putney, Vt.—We were troubled by dogs in this State, until our legislature took the matter in hand, and made the owner or the keeper of a dog pay a good round tax for the animal. That statute has had a splendid effect in relieving the farmers from the depredations of thousands of worthless, mischievous dogs. If other States would adopt a like measure they would soon find their flocks and herds enjoying their inalienable rights throughout their

whole domain. The result would be that no good, respectable citizen would keep a mischievous, worthless cur.

Jefferson County, W. Va.—The dogs have played havoc with the sheep in this neighborhood within the last six months, having killed or crippled $250 to $300 worth in that time. It is high time that a tax on dogs or some such law, for the protection of sheep owners, was enacted in our State."

The above important statements are taken from the June Report of the Agricultural Department, and speaks for itself. The journals of the whole country are filled with such details of the ravages of the dogs and complaints from the people, that the legislators will not enact laws to protect sheep-husbandry. How long shall we wait for some redress of these abuses? The incoming legislature I trust will be manly and just enough to meet the demands of the suffering farmers, and gratify the wishes of every thoughtful, sensible man, who has the general welfare of the whole community at heart.

Commissioner Capron.

It is much to be regretted that General Capron has found it necessary to his personal interest to resign his charge of the Agricultural Department, and accept a similar post under a foreign Government. He had just got the Department in fair working order, and it is under his systematic management and the reforms he introduced, just developing its real benefits to the country at large. It is to be hoped his successor, whoever he may be, will pursue the line of policy and usefulness he has inaugurated with so much care and skill. The agriculturists of the whole country, particularly of the South, are largely indebted to General Capron, and no doubt their best wishes for his success will accompany him in his new field of labor.

Insuring Stock.

I saw in a late number of the *Country Gentleman*, some suggestions as to the propriety of forming county or mutual stock Insurance companies. There can be no doubt such an institution, properly organized, would be beneficial to farmers and stock raisers, protecting them from loss, and at a small expense to each one, would make up any loss sustained by any individual member of the association. Wherever it has been tried in Europe, even when the insurance was against death from pleuro pneumonia, when raging at its height, the percentage of loss to the association was only $\frac{1}{3}$ of 1 to 1 per cent. on the value of the whole stock insured. A writer in the *Country Gentleman* thus illustrates it. He says if the owners of 7000 cows were to enter into such a compact, it would only require only one cent per cow represented to replace the loss of one of the average value of seventy dollars. Or if 2000 horses of average value of two hundred each, were insured it would only take 10 on each horse to replace the loss of each. This is a small sum to each member, but a serious help to the unfortunate loser of a horse of value to the amount of two hundred dollars. There is a great deal in this matter worth the serious consideration of farmers, and not beneath the dignity of the press to fully ventilate it, so that all its bearings may be brought before the people of our communities. I confess I like the project.

Alkalies.—Why do you put lime with your manure when composting or preparing it for application to your fruit trees, vines and vegetable garden? Because it is the recommendation of writers is not a sufficient answer. We reply that lime has been found to be the best alkali, or an alkali in the best condition to supply the demands of vegetation; the most readily appropriated by all kinds of fruit bearing trees, vines and plants. And the need of an alkali of some kind for making vegetables, trees, etc., give an abundance, and perfect products, arise from the fact revealed by chemical analysis, that lime and potash exist in them. Your soil must contain all the substances that enter into the growth of vine, tree and plant, and the fruits or products of them as well. The fruit of all these imperatively demand an alkali. Pomologists advise dressing the soil of the orchard with lime, when trees become barren of fruit; farmers advise a top dressing of land sowed to wheat, when a sufficient straw can be grown, yet the heads do not fill well for the reason that lime is needed to perfect the grain. Old soil exhausted of its lime and potash, or new land when your vines are at fault in setting and perfecting grapes, will be improved by a liberal addition of lime and ashes.—*Pleasant Valley Fruit and Wine Reporter.*

Management of Hen Manure.

I would say that in 1868, I took four bushels of dry hen manure, turned it on the barn floor, took a common flail and threshed it to a powder; then took twenty-five bushels of muck that had been dug eighteen months, spread it on the barn floor and thoroughly mixed it with the hen manure.—A single handful of this compost was put in the hill, and the corn dropped upon it. I had a splendid field of corn. Planted one row without the compost. That row could be distinguished all through the season, being about two weeks behind the rest of the field, and finally it never did catch up with the rest.

I believe if farmers that keep from twenty to thirty hens would save all the droppings and compost it the way as above, or in some better way, instead of buying fertilizers as many at the present day do, it would be very much more to their advantage.—*Cor. New England Farmer.*

AGRICULTURAL CHEMISTRY.---X.

BY J. S. H. BARTLETT, M. D.

STIMULATING MANURES.

The manures previously treated of are those which contain aliments besides the salts inseparable from them, and which, when dissolved by water, are taken up by the roots of plants. The increased action caused by the effect of these salts, has caused them to be called "stimulating manures." It would seem that plants have a preference in the matter of the salts found in the soil, or those artificially applied, some preferring potash, some soda, and some lime, and are called potash, soda, or lime plants, according to this preference.

In order to arrive at the knowledge of this, it is necessary to have recourse to a chemical analysis of the ashes of plants, when it will be evident which of these inorganic materials preponderate. It would seem that certain salts enter as natural elements into the composition of plants, inasmuch as they languish in earth not containing them, and they absorb them abundantly when they are present. These salts ought always be united with manure, the excellence of which is increased in proportion to the quantity it contains, provided it does not exceed the wants of the plants, and the action be not too energetic.

It is proved that those salts which have a base of lime are the most abundant in plants, analysis also shows that the different salts do not exist in the same proportions either in plants of different kinds, or in the different parts of the same kind. For the manner in which lime acts upon vegetation, we are indebted to Davy, whose experiments have thrown much light on the subject. He has proved that the fibrous portion of plants deprived of all the particles which can be dissolved by water, presents another series soluble after having been for sometime macerated with lime. Thus, lime may be very efficaciously employed, when it is wished to convert dry materials and fibrous roots and stalks to the nourishment of plants. Limestone crushed, and lime completely restored to a state of carbonate, do not produce this effect; it is necessary to employ lime slacked with water, and mixed with a fresh portion of that fluid, and the fibrous substances must remain for sometime exposed to the action of this solution. In this case, the lime renders soluble and suitable for nourishment, substances which in their natural state do not possess this characteristic; and for this purpose the use of it is very advantageous. Thus, when it is desirable to convert liqueous or fibrous plants into manure, it may be done by treating them with lime. If it be required to employ as manure, some substances, whether animal or vegetable, which are by nature soluble in water, this mixture with lime forms new compounds, of natures completely different from their previous principles. The compounds formed by lime with nearly all the soft animal or vegetable substances which will combine with it, are insoluble in water; accordingly lime destroys, or greatly diminishes the property of fermentation in the larger part of them, but these compounds finally undergo a change, from being exposed for a length of time to a constant action of air and water. The lime passes to a state of carbonate, and the animal and vegetable substances, being gradually decomposed, and furnishing new products capable of supplying nourishment to plants, so that lime answers two great purposes for nourishment. First, it disposes certain insoluble bodies to form by their decomposition soluble compounds; and secondly, it prolongs the action and nutritive virtue of some soft and insoluble animal and vegetable substances beyond the term they would continue to act if they were not made to enter into combination with lime.

From the foregoing, the agriculturist can draw some practical conclusions in regard to the uses of this substance, and the manner in which it should be employed, in order to have the results arising from its application conform to those which have been produced by enlightened experiments. It is acknowledged to be principally useful upon fallow lands which are broken, open sward lands, and those of a turfy nature, which are to be put in a fit state for cultivation. It is well known that in all these cases there exists in the land a greater or less quantity of roots, which by the application of lime may be made to serve more for manure by the solubility it will give to the new compound formed by them; but this effect can only be produced by thoroughly mixing the lime with the soil, as it loses its strength by exposure to the air. Subsequent tillages more intimately mix it with the soil, and place it in contact with the roots and stalks upon which it is to act.

The use of plaster or gypsum, a compound of sulphuric acid and lime, as a manure, has become common in this country as well as in Europe. There are some tracts of country, however, where its use has been attempted without success. Some have supposed this to arise from its being one of the original constituents of the soil, which derived no advantage from the addition of a new quantity. The existence of this salt naturally in those lands upon which plaster produced little or no effect, has been proved by analysis. It is also found to be less effective when applied to lands subject to the influence of the salt air; but here comes in a mooted question, on the particular merits of which we can not enter at present.

Gypsum, unprepared except by grinding, is usually employed in agriculture, that which is prepared by heat which drives off its water of crystallization, is said to produce a little more effect the first year, but after that no difference is perceptible. Gypsum is scattered by hand at the time when the leaves of plants begin to cover the ground, and when they are wet with dew is considered the most favorable opportunity. Some thought that its action ought to be attributed to the force with which it absorbs water, but as it solidifies that liquid, and does not part with either to the atmosphere or any other surrounding body, this doctrine does not seem well founded. Moreover, it is not believed that unbaked gypsum has the property of absorbing water, and yet it produces nearly the same effects as that which is baked. Others have thought that plasters acted only by favoring the putrefaction of animal substances, and the decomposition of manures. But Davy has refuted this opinion by direct experiments, placing it beyond a doubt, that the mixture of plaster with manures, whether animal or vegetable, does not facilitate decomposition.

Observation shows us that certain substances to be beneficial to plants, must be presented to them in proper proportions, for if too great a quantity of salts, easily soluble in water, be mixed with the soil, the plants will wither and die, though they will languish if totally deprived of them. If we consider that salts can act upon plants only in proportion to their solubility in water, through which medium they are conveyed, we can conceive that those which are least soluble will be productive of the greatest advantage. The solubility of plaster in water appears to be precisely of the degree most beneficial, 300 parts of water will dissolve only one of plaster. Its action is therefore constant and uniform without being hurtiful. As plants have no other medium than air and water, through which to receive their supplies and this last transmits to them indiscriminately all which it can dissolve from the soil, it follows that the best saline manures are those which can be only gradually dissolved.

This principle is applicable to all manures of whatever nature. There is, however, this difference in the effects of manures purely nutrive, and of the stimulating or saline manures. If the first be too abundant the plant absorbs more nourishment than it can readily digest, and becomes affected by a kind of obesity, the texture of its organs is rendered soft, loose, and spongy, and without due degree of consistency, causing the lodging of the crops. While if the stimulating manures be supplied too profusely, and especially if they be of a kind very soluble in water, the organs of the plants are dried and parched by the excess they receive.—*Journal of Applied Chemistry.*

CHEESE MAKING.

HERKIMER COUNTY, NEAR UTICA, N. Y.
JULY 14TH, 1871.

To the Editors of the Maryland Farmer:

I notice in your July number the request of "D. C. B.," of Waxahachie, Texas, for "a good plain description of cheese making from the milking to the boxing," &c. Being interested in that branch of industry in a section, conceded, I believe, the centre of the cheese making interest in this country, and having been benefited by the same means with which "D. C. B." is seeking light, I rather feel it a duty incumbent on me to contribute a mite for his—and perhaps others—information and benefit.

I shall attempt only an outline of the now general and most approved practice, as neither your space or my time will allow of a display of minutiæ, a knowledge of much of which must be obtained by experience, and the exercise of judgment controlled by circumstances. Cheese making is not wholly a mechanical operation, it is in part chemical, subject to the effect of climate, weather, the variation of seasons, and peculiarity of demand of market. All these must be considered; but to set forth fully and plainly the means of obtaining perfection and uniformity of product under all these variations, would make a book larger than the monthly issue of your valuable magazine, without exhausting the subject. But let not "D. C. B." be deterred by the apparent magnitude and insurmountable character of these considerations, from engaging in the business, they do not present difficulties as formidable as they at first sight may appear. If he has cold water accessible, and has also, or will fix up a suitable dairy house, success is as certain with him as with many others, who have been successful under similar circumstances. But to the process.

The common practice is to make the cheese of two milkings; uniting the evening's and next morning's messes. That of the evening, as soon as drawn, is strained into the cheese vat, and reduced in temperature as rapidly as possible, by passing cold water around the outside of the tin vat holding the milk; and by frequent agitation of the milk with a dipper, which not only assists in cooling it, but also serves the purpose of removing the animal odor; the occasional use of which also prevents the rising of the cream to the surface.

But as it is inconvenient to continue this stirring during the whole night, more or less cream will have formed on the surface; if it has become so tenacious as not to be again readily incorporated with the milk by agitation, it is skimmed off and gradually passed through the strainer with the warm morning's milk.

The two messes of milk being now in the vat, it is occasionally agitated to keep in the cream, and heat is applied till it indicates a temperature of 85° F., at which point the heating is stopped, and an amount of rennet sufficient to properly coagulate the milk in forty to forty-five minutes, together with the coloring—if any is used—is thoroughly stirred in, and then left at rest—covered with a cloth to retain the heat—till the coagulation is complete; which may be known by the curd being in a condition to be cut with a knife, and by its breaking over, and having little or no milky appearance on the finger. The curd is then cut up by knives made for the purpose, into cubes of about half an inch, which liberates the whey from the curds; and the heat is then again started, and very slowly kept up until the thermometer indicates a temperature in the curds and whey of 98° to 100° F.—two hours should be consumed in reaching this temperature, at which point it should be retained for one hour longer. During the heating process the curd should be gently moved with the hands—very gently in the early stages—and so separated that the whey in which it is being cooked may reach all the particles, that all may be cooked alike. If this portion of the process has been properly attended to, the particles of curd are about the size of grains of corn.

The whey is now drained from the curd, and the curd spread evenly over the bottom of the vat, for cooling and exposure to the air; and so left for fifteen or twenty minutes, when it is cut into squares —say of ten inches—and turned over to give a like exposure to the underside. It is then cut into smaller pieces and passed through the curd mill, which prepares it for salting; salt being mixed with the curd at the rate of about three pounds of salt to one hundred pounds of curd.

The press hoop is now placed upon the press board, and a heavy cotton cloth—sufficiently large to envelop the whole cheese—is spread into it and filled with curd, which is submitted to pressure under a $1\frac{3}{4}$ inch screw, from one to two hours; the cloth is then removed from the cheese, which is then bandaged with light cotton cloth, made for the purpose. The bandage being about three inches wider than the height of the cheese, so as to leave one and a half inches to turn over on the top and bottom of the cheese, to protect the corners in turning. The ends of the bandage is first sewed together so that it shall closely encircle the cheese; it is then drawn on, and the edges—wet with whey —are smoothed down over the corners; the hoop is again placed over it, and pressure applied. It remains in press until the hoops are wanted for next day's cheese, an occasional turn being given to the screw.

The dressing being complete, the cheese is removed from the hoop, and its entire surface greased--usually with grease that is skimmed from the surface of the whey, which is covered over and left standing for the purpose—the skimming having been boiled to evaporate the remaining whey. This is performed daily, with a decreasing amount of grease, accompanied with turning of the cheese and rubbing with the palm of the hand. After the first week but little grease need be used, but the turning should be continued, and the surface kept smooth and free from mould by the rubbing.

The curing room should be free from dampness, flies and vermin; and though it should be ventilated, currents of air, and the direct rays of the sun, should not be allowed to strike the surfaces of the cheese, as they will endanger cracking. Probably an even temperature of 75° in the curing room is best, for cheese that is to be ready for market in twenty-five to thirty days; but if possible to prevent, it should never exceed 85°. And now if your milk has been in good condition, the curd properly made, and the curing duly performed, your cheese is ready for boxing and for market.

Anticipating that "D. C. B." will wish to know more about coloring and rennet, I will say a few words on the preparation and use of these.

Color is almost universally used for the purpose of imparting to the cheese a rich creamy appearance, though it adds nothing to its character otherwise. Annatta is the only article used for this purpose, and if obtained pure, is in no way detrimental. Much complaint, however, has recently been made of adulteration of this article; but it can be obtained pure of responsible and honorable dealers. I will refer to such before closing.

A very common fault in the use of coloring in cheese, is that too much is applied; giving the cheese too high a color, at once betraying its artificial character, and inducing doubt as to its true quality —thus defeating the object sought to be obtained. The best annatta now to be obtained is the "extract," which is ready for use. I shall therefore say nothing of the method of preparing it for use from the basket.

Rennet —In the making of cheese this article has no substitute. It is a preparation made by soaking in soft water or whey, of the dried stomach of the calf; that stomach, or portion of it only, in which the milk is converted into curds, before entering into the intestines for digestion in the natural process in the calf. In killing the calf, that portion of the stomach only should be saved which contains curd, more or less of which will usually be found in it. If, however, no curd is found, save that part only which has a smooth inner surface. Turn the rennet or stomach inside out, shake off its con-

tents, but do not wash it; fill it with salt, and spread on a plate or hang in a dry place to dry. It should not be allowed to make brine. The rennet is doubtless at its greatest strength when the calf is about a week old, or soon after the milk of the cow is in condition to be used for the dairy.

In preparing for use, fresh whey that has been boiled and skimmed, is generally preferred—though some used boiled water—at the rate of two rennets per gallon of whey or water, which should be tepid only, and contain sufficient salt to prevent putrifaction. When soaked so as to be pliable, they should be thoroughly rubbed in the liquor, which should be kept in a stone jar in a cool place. After two or three days of soaking and rubbing, the rennets may be removed, and the liquor is ready for use. A like amount of water or whey may again be added to the rennets a second and third time, and the liquid used with advantage in preparing another batch.

Of the amount of rennet to be used in "setting" a given quantity of milk, no rate other than that it should be sufficient in quantity to perform its office in about forty minutes—can be given, as each batch will be found to materially vary in strength. The proper amount must therefore be determined by trial, after each new lot of rennets used.

The following articles are wanted in the cheese dairy or factory. If we take "D. B. C.'s" forty cows milk as a basis to provide for, should be in size, &c , about as follows :

One Cheese Vat, with heater attached, capacity, 135 gallons.

Two Cheese Press Hoops, and followers, 14½ inches in diameter.

Two Press Screws—the press frame can be made at home, and cost of transportation saved.

Two Curd Knives—one for cutting the curd perpendicularly, the other horizontally.

Two Stone Rennet Jars, about ten gallons each.

One Curd Mill.

One Thermometer.

One each : *Curd Scoop, Pail and Dipper.*

I think nothing more is wanted in the way of apparatus or machinery. The curing tables may be made by any ordinary carpenter ; the tops should be smooth, should not be of spruce, pine, or any wood that can impart taste or smell to the cheese.

Everything that may be required in the business in the way of machinery, apparatus, implements, or findings, such as rennets, annotta, cheese bandage, &c., can be procured of Wm. Ralph & Co., Utica, N. Y., whose apparatuses I prefer to any with which I am acquainted. They are an honorable and responsible firm. R. C. W

THE TURNIP CROP.

There is no crop that the farmer can put in the ground which pays him better than the turnip. We are aware that with some persons it is looked upon as of little account; but it has never received the consideration to which it is really entitled; and those who *turn up* their noses at it are not genuine farmers.

It is a crop moreover, that is put in at a time when the hurrying work of the season is over; and it occupies ground that has already been used for something else.

The cultivation also, say of from one to two acres of turnips, involves comparatively little labor.—The crop, too, is harvested in November, when there is almost no other labor on the farm to interfere with it.

As to the variety of seed to sow, we believe there is no turnip equal to the *Purple-top*. A top-dressing of *bone-manure* is almost indispensable to an abundant crop.

For an early crop take the Early Flat Dutch and sow broadcast early in July. The Purple Top for the regular farm crop. This should be sowed in drills thirty inches apart, and when the turnips are the size of a hickory nut, thin out to eight or ten inches apart in the row. They seldom fail in affording a satisfactory crop. The crop can be put in in the latter part of July or first half of August.

Where land is a little short, sow *among the corn* at the last working. They will not interfere in the least with that crop, generally, and very little when it is harvested.

Be sure always to procure seed from established seed-houses of reputation, and use that grown here instead of in Europe, if you wish the best and safest article.—*Germantown Telegraph.*

TO KEEP WALKS CLEAR OF WEEDS AND GRASS.—A correspondent asks how this can be done, unless by the constant use of the hoe. We have seen several modes recommended of preparations of drugs dissolved, &c., but they are somewhat expensive and troublesome to adopt. The best way we know of, *except the hoe*, is to give the walks a good sprinkling of *salt* or of salt-water. Care must be taken to keep it from box-edging, plants and very young trees. A couple of applications a season, if well done and a sufficient dose is applied, will do the business pretty effectually. The best way, however, undoubtedly, is to go over the walk once a week and remove the weeds with hoe or scraper. Attended to thus there will be little grass and weeds to get rid of; hence the job will not be laborious and the walks always clean.—*Germantown Telegraph.*

FARMERS' CLUBS.

A correspondent whose farm is across the Ohio river, opposite Paducah, Kentucky, writes: "My neighbors are desirous of forming a Farmers' Club. They have called on me to assist them. Can you furnish some rules and regulations, a constitution, &c., to govern and give us a start?"

We gladly comply with this request, believing that every organization of the kind cannot fail to be interesting and profitable, and hoping that the suggestions we make may be adopted in other places. No farmer can have been in the business many years without making some valuable observations or experiments, which may be useful to others, and when he and several more impart what they have thus learned, all are benefited to a large extent. The object of a Club is to draw out this information, and stimulate to new efforts. This intercourse of neighbors is attended with additional advantages; they become better acquainted with each other, feel more interest in each other's success, and become more accustomed to telling directly to the point what they know, and the secretaries and reporters improve in ready writing in taking notes. In winter, when the meetings are held once a week in the evening, they become interesting social gatherings if small, and instructive meetings if large. While imparting knowledge, they stimulate a desire for more. Five or six active and punctual farmers may start a Club of this kind and carry it on successfully. When a larger number meet, their gatherings assume more of the character of public meetings. In either case, there should be a full organization and a regular order of proceeding. If there is not a regular order adopted, a few of the most talkative will be apt to engross most of the time, and the rest, more bashful and listening at first, will soon begin to whispher and afterwards talks louder to their next neighbors, and the assembly will finally become a confused assembly. Hence the importance of a good chairman, and order in discussion.

The first thing to do in organizing a Club is to discuss the matter with neighbors and agree to meet at a place provided and agreed on. Those who are the most active, energetic and successful in managing their farms, and who keep every thing in the best order, will be there nearest the appointed hour, but they will have to wait a few minutes for the more feeble and lagging. Appoint a courteous but prompt chairman, and a ready secretary. Then move the adoption of a constitution, which may be like the following, with any variation which local circumstances may seem to require:

CONSTITUTION.

ARTICLE 1. This Association shall be call the—— Farmers' Club, and its object shall be to increase knowledge and impart success in farming, fruit raising and gardening.

ART. 2. Its officers shall be a President, Vice-President, Secretary, and Treasurer—who together, shall constitute a Board of Directors, to attend to all business not otherwise provided for. They shall be chosen annually, on the —— day of ——, by ballot.

ART. 3. The Club shall hold regular weekly meetings during the long evenings of autumn and winter, and monthly meetings in spring and summer.

ART. 4. Any citizen of —— may become a member by signing the constitution, and paying one dollar annually into the treasury.

ART. 5. The constitution may be amended by a two-thirds vote at any meeting, of which notice shall be given at the next previous meeting.

The form we have here given may be varied by omitting the vice president and treasurer, if the club is small and has no admission fee; or there may be two or more vice-presidents, and a regular Reporter added, if the association is large, and a summary of the discussion is to be publish in a local or agricultural paper. Such a regular report would give character, importance and usefulness to the culb, and should be adopted where there is sufficient material for it, and a ready reporter, who is skillful in sifting out good matter, can be found. If there is enough strength in it to hold a Fair once a year, its reputation and usefulness would be still further increased.

Each meeting should be specially devoted to one or more subjects for discussion; and in order to prevent any balk or failure, one of the members, who may be well informed on the subject, should be appointed beforehand or at a previous meeting to open the discussion. He may do this verbally, or by reading a practical essay on the subject, which should not exceed fifteen minutes in length. Or, selections may be read from the *Country Gentleman*, appropriate to the occasion. This opening will suggest many questions, remarks, and details of experiments from other members, and these will serve to bring out much valuable information.—There will be no difficulty in finding subjects enough, after the organization is well under way; but it may be well to name a few by way of example.

Draining—how best performed, the results of experience, and advantages.

Rotation of crops—examples, &c.

What animals bring the most money for the food they consume?

Farm implements.

Application of manure.

Arrangement of farm buildings.

Dairy management.

Management of pastures.

Best way to raise corn, wheat, &c.

Apples, management of orchards, marketing, &c.

Ground and ungrounnd feed for animals.

During the summer season, interesting and instructive FIELD MEETINGS may be held once a month. One or more farms of the members are visited, the the modes of cultivation and management examined and commented on, and suggestions made for improvement. No dobut some will feel reluctant to have neighbors see their weedy crops and broken gates, but a prospect of such a visit will stimulate them to improve, and besides this, they will get help and assistance by way of many valuable suggestions. This practice would, in the course of a few years, effect a great improvement in the appearance of the farming. It will be at the option of the visited whether they give a collation, which, if the weather is pleasant, may be under the shade of trees, and may consist of strawberries in early summer, or peaches, pears or watermelons at later periods. Altogether, these occasions may become interesting and beneficial, and have a greatly improving effect on the neighborhood.—*Country Gentleman.*

German Salts of Potash.

We have been making some investigations recently in regard to the above salts and learn that they vary much in composition when taken from different parts of the mines. Each lot however is analyzed, we understand, and sold on the basis of its analysis. A variety for sale in Baltimore, under the name of "*Kainit,*" is the original salt burned and afterwards ground, and when having the following composition, may be bought at present at $45.00 per ton of 2,000 lbs:

Sulphate Potash	28 to 30 ℔ ct.
Sulphate Magnesia	14 to 18 ℔ ct.
Chloride Magnesia	4 to 5 ℔ ct.
Chloride Sodium (common salt)	35 to 45 ℔ ct.
Plaster	10 to 12 ℔ ct.

In a ton there would be, say 600 lbs of sulphate potash—equivalent to 324 lbs potash (oxide potassium). This is worth, according to Prof. Johnson, 7 cents per pound, making the value of the 234 lbs $22.68. After due allowance is made for the value of the other ingredients in the Kainit, the price appears to be entirely too high. If it could be brought at a reasonable price, the substance would be valuable as a manure for sandy lands. It might be mixed with guano, as no objectionable chemical reaction would result from the mixing which is not the case with ordinary wood ashes.—*Southern Cult.*

ANTS' NESTS IN GARDENS.—A correspondent informs the *American Entomologist* that by burying a few sliced onions in ants' nests he has caused them to abandon their quarters. The same paper learns from horticulturists, that two or three tablespoonfuls of kerosene poured into the holes in their nests will produce the same effect.

WHEAT CULTURE IN EASTERN PENNSYLVANIA.

Some friend has sent us the *Lancaster* (Pa.) *Express*, containing a report of the discussions at a meeting of the Pequa Farmers' Club, on the subject of wheat culture. From the remarks of Mr. Breckbill, we extract the following:

In growing wheat we should rise equal to the emergency, and increase the crop per acre above the minimum. In former times the field for wheat was plowed as early after harvest as convenient, exposed to the mellowing effect of the heat and the coolness of the night through contraction and expansion, then it was treated with a dressing of composted lime, later barn yard manure was spread upon it, then plowed again, but quite shallow. The advice of the successful wheat grower of to-day is: "Keep your manure near the surface, and prepare a shallow seed bed." It is doubtful whether insects have injured wheat as much as the upheavel by frost. Every wheat-grower should understand the botanical nature of the plant; each plant has a seminary or primary, and the secondary system of roots. When the vegetable matter is kept near the surface, and the seed not sown too deeply, these two systems are closer together, they grow and spread out horizontally, forming a complete mat of fibrous roots in the soil, which rises and settles down bodily when freezing and thawing in the winter, and which may occur many times without permanent injury. When the seed is put in too deep, the seminal roots will adhere so firmly that under certain conditions of soil and frost, they very frequently are torn asunder. In case of a good protection by snow and late winter, these conditions would be much modified. It is claimed that the snow fall is less than formerly, which being true to a certain extent, we should prepare to meet the occasion. By the use of trees, favorable conditions of moisture, snow, &c., are effected; and that timber belts to occupy one-fourth of the area of every agricultural district would suit the purpose. Of manures for wheat, I think the best can be found in grain-fed barnyard manure, clover, lime and ashes; and when ashes cannot be had, plow deeper. It is astonishing what an effect a little lime has towards making well-filled heads of wheat, especially when the soil is full of vegetable matter. I suppose there can be no uniform rule as to the amount of seed to be sown to the acre. The best wheat I ever grew was from seeding about a bushel and a peck, but it was sown early. R. A. Gilpin, of West Chester, planted one acre with three pecks in drills twenty inches apart, and planted the remainder of the field with an ordinary drill. In the spring, as soon as the ground became dry, he cultivated with a garden

hoe three inches deep. The single acre yielded twenty-three bushels—the remainder nine. J. J. Mechi, of England, dibbled an acre at intervals of about four and a half inches, one kernel in a hole. One grain made from twenty to thirty stems, and the acre produced fifty-eight bushels of heavy wheat and two and three-fourths tons of straw, making e heaviest crop on his farm. Members of the club should experiment and report. I do not expect such results, but the reports would be interesting. An important feature in growing wheat is sowing good seed and an unmixed variety, and kept as true as possible to the kind. All wheat for seed should be avoided that has become degenerated by sport, or hybridized mongrels, but kept up to the purest and highest standard by annual selection of the best cultivated and clearest defined heads of the variety.

FATTENING CATTLE.

Mr. Bela S. Hastings, who is one of the leading drovers from Vermont, in supplying cattle for the Boston market, gave his experience and observation in relation to fattening stock, at a late meeting of the Caledonia County Farmers' Club :

He said the main object of the farmer was to get the most out of his fodder. It does not pay to feed grain to a poor creature, one that does not take on flesh rapidly. Farmers will do better to dispose of such stock for what it will bring, and procure animals of good style. He believed that one-half of the grain fed was wasted by not being fed to good cattle. Another important point is, farmers do not feed heavy enough. He would commence with as much feed as they would bear first, and then increase. In feeding twelve quarts of meal, the last four quarts are worth twice as much as the first four for fattening purposes. Some farmers complain that they do not get pay for the grain they feed out, but he had noticed that it was only those that fed light that thus complained. Whether the animal was to be fed a long or short time, he would recommend heavy feeding. Mr. Hastings said he knew nothing better than corn meal. The cob is not worth much, if anything. Those persons of whom he purchased fat stock, who were the most successful, and made it most profitable, were those who fed meal largely. If a farmer has potatoes or other roots, it is well enough to feed those in part, but a farmer will do better to exchange some of his roots for corn, than to feed roots altogether. It is important to feed regularly and not too often, as the stock will eat and lie down and ruminate. It is better to feed cattle but three times a day, and sheep but once.

THE COST OF FENCES.

A writer in the Illinois Agricultural Report for 1864 says: "The fences of the United States have cost more than the houses, cities included; more than the ships, boats, and vessels of every description, which sail the ocean, lakes, and rivers; more than our manufactories, of all kinds, with their machinery; more than any one class of property, aside from real estate, except, it may be the railroads of our country." This may seem like an exaggerated statement, but a little estimate will show that it is not so extravagant as would at first appear.

The first cost of the fences of New-York State was between one hundred and one hundred and fifty million dollars. Robinson gives it as $114,000,000. Assuming this to be approximately correct and estimating the first cost of the fences of other States on the same basis, we have, as the total first expense of the fences of the whole country the vast sum of $1,-296,000,000.

This requires to be renewed once in ten years, giving $129,600,000 as the annual cost, to which should be added, however, at least half as much more for repairs, making the aggregate of $194,-400,000 as the annual national expense—a sum, we believe, below the actual figures, yet quite beyond comprehension. Nicholas Biddle estimated that the "fence-tax" of Pennsylvania was ten million dollars a year. General James T. Worthington, of Ohio, says that there are 18,000,000 acres of land in Ohio inclosed with 45,000 miles of fences, at a prime cost of $115,000,000 and at a yearly expense for repairs, etc., of $7,680,000

If roadside and boundary fences can be dispensed with, half the cost of fencing will be saved. That cost is now an annual tax of $1.50 on every acre of improved land in the United States—the "fence-tax" being twice or thrice as great as the aggregate of the State and local taxes combined.

Why can not a large portion of this outlay be saved for some profitable investment? Every dollar rescued from fences may be added to productive wealth. Fences are dead capital; they pay no interest, and are a constant drain upon the pocket. As Mr. Greeley says, "We poison our land with fences; they are a shelter for weeds, as well as a vast and useless expense." The indirect waste which they inflict is almost as great as their direct cost. A Virginia zigzag fence occupies five acres for every hundred inclosed, thus imposing a five per cent tax on the market value of the soil—a tax that would be felt to be oppressive if it were for the payment of the national debt instead of to shelter a growth of weeds.

Shall we fence stock out or in? There is no doubt that our people now expend four times as much

money to *fence stock out* as would be required to *fence it in*. Our present custom, which commands universal fencing, is the worst blunder the practical American people ever made. Enterprising and original in many matters, they are here following slavishly, generation after generation, the habit of the earliest English colonies—following it, though very expensive and inconvenient, because it is "the good old way." Europe has learned a more rational method. There are ten times as many fences in Illinois as in Germany; and Dutchess County, in New York, has more than all France. In France, Germany, and Holland farmers hold their lands in common, with only narrow paths between.

The continental system of having few or no fences is evidently the best; and even exclusive England is slowly adopting it. America will inevitably follow; for economy, taste, thorough tillage, fair play, and good sense command it, and the time will come before many years, when the absence of farm fences will be a sign of progressive culture.

The immense cost of sustaining fences; the inconvenience of having them always in the way of thorough tillage, and of easy ingress and egress to the premises; the impassible snow-drifts accumulated by them; the shelter they afford to weeds and briars; the protection they afford to many of the worst animal pests of the farm, and their unsightly appearance generally throughout the country, as the receptacle of stone heaps, piles of brush and dead trees, to say nothing of the countless acres rendered worse than useless by their occupancy, would seem sufficient reasons for disposing of fences wherever not indispensable for purposes of pasturing.—*People's Journal.*

Honey Locust.—The editor of the *Gardener's Monthly* says that the honey locust is an admirable hedge plant for cold climates, and is far better than any other plant where the soil is poor and thin.—There is one great advantage which it possesses over other plants. The osage orange, for instance, has thorns on its young growth, and that is the end of them; but thorns come out of the old wood of the locust and continue to come out year after year, branching and growing simply as thorns, and nothing will dare go through a hedge of this plant, even although there should be a tolerably large gap invitingly open.

Protection Against Borers.—The State Entomologist of Missouri says that the washing of fruit-trees with soap, or the application of any alkaline solution, is an infallible protection against borers; and this is confirmed by the experience of some of the most extensive fruit-growers in that section. We have told our readers this more than a dozen years ago.

WHAT AILS THE FOWLS?

BY J. S. IVES.

This question, so often asked, which, without a knowledge of the management and mode of keeping, would be impossible to answer satisfactorily, as in most cases all remedies are unavailing while the cause of the disease remains. I believe that ninety cases in one hundred, if the laws of health are carefully studied, that we need fear no disease in our poultry. Too many fowls are often kept together, in ill-ventilated coops, and the droppings not removed daily. There are many rules to be observed in the management of poultry, any one of which, if neglected, will produce disease in the fowls, and unprofitableness to the breeder. A thoroughly ventilated coop, dryness, a varied grain diet, fresh water, and regularity in feeding, are the most essential rules to be observed. Never over-feed. It is true, less food will be consumed by keeping it before them, as they will soon be disgusted by the sight of food, and become void of that activity necessary to health and the production of eggs.

My stock birds number one hundred fowls. They are kept in ten separate coops, each apartment being twelve feet square, with glass front. In the month of August one foot of pasture turf, covered with six inches of gravel, is placed in each coop; by winter it is thoroughly dry. This is spaded over once a week, supplying the fowls with fresh grass all winter. The following spring the soil is removed to the compost pile, which, when mixed with one hundred pounds of Peruvian guano, or wood ashes, supplies my corn field with a most valuable fertilizer, nearly all the gravel having been consumed by the fowls. Few are aware of the large quantity of gravel required during the winter months. In feeding, I take my bucket of corn at daylight, feeding until the fowls are satisfied. One pint of oats is also fed to each coop for one week, following each week with barley, wheat and buckwheat. At noon they receive their corn until satisfied; at night, one quart of oats. One pound of beef is allowed each coop twice a week; fresh water twice each day, and the droppings removed every morning. My favorite breed, as I have often stated, is the Light Brahma. When properly bred, in my opinion, they have no equal.—*The Poulterer.*

How to Make Hens Lay.—Give plenty of wheat as well as corn, and when feeding with dough, mix wheat bran, coarse flour, or even fine flour of wheat with Indian meal. Wheat and corn are the best things. Treated in this way they will "lay like witches."—*Cor. Mass. Ploughman.*

The Dairy.

MAKING CHEESE FROM A FEW COWS.

X. A. WILLARD.

Sometimes people who have but two or three cows would like to make a few cheeses for family use. If there happen to be three or four neighbors similarly situated—that is, each having but a few cows—it will be a good plan for all to join together, delivering a certain quantity of milk daily at some central neighbor's house where the cheese is to be made. There will be no very great trouble in this, and by assisting each other all may be supplied. As the labor in manufacture will be no more for ten pails of milk than for four, and as the cheese can then be made up at once, it will be advisable to associate together wherever it is practicable. Now ten pails of milk will make say twenty-five gallons, and the twenty-five gallons will give a cheese of twenty pounds, and perhaps a trifle over.

If the milk is worked in the manner we have described in the previous article referred to, the curds may be pressed in a hoop eleven inches in diameter, and about the same in height. Small cheeses of this kind need not be bandaged. After coming from the hoop they should be oiled over with a little fresh butter, to prevent the rind from checking, and may be placed upon the pantry shelf. —They will need turning every day, giving the surface a smart rubbing with the hand, which will prevent the cheese flies from securing a safe deposit of their eggs.

If the rind of the cheese gets dry it will be well to oil again with fresh butter. If properly cared for, the cheese will begin to be mellow in four or five weeks and will be eatable, though age will improve it, and when six months old it should be of delicious flavor and quality, if well made.

But if the quantity of milk is too small to make a curd for one pressing, then resort may be had to what is termed double curds. These are managed after the following manner:

The milk is treated precisely as if there was sufficient for a cheese. After the curds have been drained and slightly salted, and are ready for the hoop, they are set aside in a cool place in the cellar until next day. Then after the next curds are ready, the previous day's curds are treated with warm whey, so that they may be broken up, when they are drained and the two days' curds are thoroughly mingled together and salted. They are then put to press, and will unite together the same as if they had been a "one day's cheese."—We have seen some most excellent cheese made in this way—the cheese as fine in flavor and quality as one would wish to see.

Sometimes curds are kept in this way three days or more, until a sufficient quantity has accumulated to make a cheese of the desired size. In this way cheese can be made when only one cow is kept. Indeed we have often eaten of cheese made from the milk of one cow, and it was very good cheese too; much better than some factorys make which we have tasted.

There is another way of managing the curds called "grafting." As soon as the curds are ready they are put to press. The next day the hoop is taken off, and a thin scale taken from the top of the cheese with a sharp knife. The top rind and the upper edges being pared off, the parings are broken up and warmed by the addition of whey. They are then mingled with the new curds, which are then placed in the hoop on top of the previous day's cheese and put to press. The two days' curds will adhere, and in this way small quantities of milk may be utilized in cheese-making. We once knew an old dairy-woman, who kept a few cows and "grafted" her cheese three times. So nicely did she manage it, and of such really fine quality were her goods, that her "grafted cheese" sold in the market at the highest price, and some very sharp dealers never suspected how the cheese were made.

Grafted cheese should always be bandaged, for unless the whey is very thoroughly drained from the curds, the two sections or grafts will not adhere so firmly as the parts where they are not joined. It is a very good plan in grafting cheese, after paring off the rind as we have described, to cut across the cheese two or three times, taking out a small triangular strip. Some people after paring the rind make the upper surface rough by scraping with the point of a knife. This is done for the purpose of giving the new curds a stronger hold on those of the previous day.

Now that we have explained the manner of making "double curded cheese," we hope no one will be deterred from trying their hand at cheese-making on account of having the milk of only a few cows. —*Western Rural.*

WATER FOR SHEEP.—A correspondent of the *Western Rural* asks if it is necessary to furnish his sheep with water. It answers, Yes. Not that they will not live without it, for we have known them to be without drinking for a month, and apparently suffer but little if any inconvenience. But we have also noticed that where they have access to good, pure water, no animal resorts to it with more regularity, or partakes of it with more seeming satisfaction. Especially do we think it important that ewes with unweaned lambs should have water within easy reach.

The Poultry House.

PREPARING POULTRY FOR MARKET.

We fatten the poultry as long as thought proper, but do not feed them for two days before the day of killing, so as to leave their crops empty, for when those with full crops are dressed, the flesh on and around the crop becomes blue, and renders them less salable on this account. Having put a keen edge on a small bladed penknife, we hang the fowls up by the legs, to strings put up for that purpose. We stick them in the mouth, or rather the throat, by putting the knife in the mouth. It is best to make a deep cross-cut, and to hold the head of the fowl down until it ceases to struggle, when it can be left until thoroughly bled. After killing, the birds should be conveyed to some suitable building, to prevent the feathers from blowing away, and they should be picked while yet warm—of course without scalding, for that makes them look peaked. Remove the feathers with a very quick motion, taking a few in the hand at a time. Be careful while picking the largest feathers that support the wings, so as not to tear the flesh. Keep all the different feathers in separate places; the refuse ones, such as the large ones and quills, may be thrown upon the manure-pile, while the other or good ones should be put in some convenient place for future use. If the fowl be a turkey, pick the body, legs and neck clean, leaving the large feathers on the tail and tip of the wings Chickens are, as a general thing, divested of all their covering, unless the samples are extra large and finely dressed, when the feathers are left on the last joint of the wings, and then tied in pairs. Ducks and geese are deprived of all their feathers. Geese are sold singly, but ducks are done up in pairs, and are mostly killed by being stuck in the neck.

Packing.—In packing poultry, do not do as some writer on this subject says, "draw and salt them slightly," but be sure to use a good clean box. The wings should be pressed as close to the body as possible. Settle the fowls in layers in the boxes, so as to fix them in their proper positions, and to prevent any possibility of injury to the outer skin in transportation. When a box is full, put some fresh clean straw on the top, and also in the bottom and sides, if thought best. Nail on the top securely, mark the exact tare and net weight of the package, address the box plainly, ship it to some responsible dealer, and you will undoubtedly receive satisfactory prices when compared with current rates.—*Hearth and Home.*

All permanent improvements of land look to lime for their basis.

2

PACKING EGGS.

Always in packing eggs put the large end down. The vitality of eggs packed this way is as 2 to 1, if packed the small end down. Mr. Wright, the celebrated author, says that repeated experiments have demonstrated the fact to his entire satisfaction, and that "eggs a month old when packed this way are perfectly good for hatching, and thus the eggs of valuable birds can be kept till a hen is ready for them, or they can be sent long distances with hope of success. This is a subject of importance, and we hope our correspondents will make a note of their experiments and the results and give the readers of the *Poulterer* the benefit of them.

Period of Gestation.—The following will be found correct as the shortest, mean longest period and of Gestation:

Turkey.—Shortest period 24 days, mean 27, longest 30.

Hen.—Shortest period 19 days, mean 21, longest 24.

Duck.—Shortest period 28 days, mean 30, longest 32.

Goose.—Shortest period 27 days, mean 30, longest 32.

Food for Chicks.—Chicks under two weeks should be fed as often as every two hours; be careful and feed no more than they will eat up clean each time. The first feed should be given as soon after daylight as possible, the last just at dark.—See that your chicks have green food; if they are not where they can reach it mix it with their feed; grass, chopped fine, lettuce, etc. A little meat once a day with their food is a good thing.

Cure for Roup.—As soon as a fowl shows symptoms of Roup, remove it at once to a warm, dry place, bathe the head with warm water and give a dose of three or four Compound Lobelia pills (which can be had at most drug stores) repeat the dose once a day, until a cure is effected, not omitting to bathe the head. I have had good success with the above, but the disease has always been in the first stages, as I think if taken then it saves much trouble.—*Cor. Poultry Bulletin.*

The following recipe has been found an effectual remedy for scruff on the legs of poultry:

20 grains carbonate of soda; one ounce of lard; 1 drachm sulphur. Apply it occasionally to the legs till a healthy appearance is restored.

Double flowering geraniums are fast becoming universal favorites, and will, we have no doubt, take first rank for some years to come, with all lovers of the beautiful.

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THE AGRICULTURAL FAIRS in Virginia will commence as follows: Wytheville, Southwestern Virginia Agricultural Society, October 11. Winchester, Shenandoah Valley Agricultural Society, October 18. Lynchburg, Agricultural and Mechanical Society, October 24. Staunton, Augusta County Fair, October —. Petersburg, Petersburg Agricultural Society, October 24. Richmond, State Agricultural Society, October 31.

AGRICULTURAL CONGRESS.—A meeting of delegates from agricultural societies, embracing every section of the United States, will be held at Nashville, October 3, the object being the organization of an Agricultural Congress. The Tennessee State fair commences the same day.

To Fruit Growers.

The Cambridge (Md.) *Herald* has a number of letters from commission merchants in Baltimore and New York, urging it to advise farmers to be more careful in picking and shipping fruit. They all urge that fruit should be allowed to attain its full growth, but gathered before it gets soft. Mr. A. writes:

"I have sold in New York to-day one hundred boxes of peaches that does not clear expenses to the fruit grower, but had he selected from the hundred boxes fifty boxes of good fruit, and fed the rest to the hogs, they would have cleared to the growers one hundred dollars. The hundred boxes of peaches sold for one dollar a box, and the expenses were more than this amount, for freight, commission and cartage in New York amounted to ninety-one cents per box, leaving but nine cents per box for gathering and cartage here. About one-fourth of these peaches were soft and mashing up, and spoiled the appearance of those in good condition. One-half of the lot were fine peaches, and had they been shipped by themselves would have brought three dollars a box. One-fourth of them were hard and would not have been ripe for a week." Certainly this, adds the *Herald*, is the condition of much of the fruit that leaves Cambridge, and it continues: "Will our fruit growers ever learn that it is quality and not quantity that New York people demand; that they will pay more for a peck of good fruit than a bushel of mixed, indifferent fruit. That it costs just as much to transport a car loaded with the commonest kinds, as it does one loaded with the most delicious and choice fruit; that it costs them but a few moments to cull their fruit; that first quality fruit, like the first quality grain, costs more attention and more care, but pays in the end a thousand times more. We sincerely trust the fruit growers will profit by the lesson taught them, from the fact that whilst good, choice peaches in New York market will clear two dollars a box, unripe and too ripe will not clear a cent."

THE CUMBERLAND (MD.,) AGRICULTURAL AND MECHANICAL SOCIETY.—The Board of Managers of the Agricultural and Mechanical Society met in extra session recently at Cumberland, to perfect arrangements for the fall fair.

The list of premiums to be offered at the next fair, to be held on the 16th, 17th, 18th and 19th days of October next, was submitted by the committee, and adopted. The list will differ but little from that of last year, some few premiums for cattle, etc. having been increased. Chief Marshal, James M. Schley, was re-elected, and Mr. Jacob Brengle was chosen for Assistant Marshal.

AGRICULTURE A FRAUD!

A writer in the Cincinnati *Times*, having perused Horace Greeley's book about farming, with the immediate effect of becoming muddled, indites the following, which he is careful to explain is "not by H. G:"

The basest fraud of earth is agriculture. The deadliest *ignis fatuus* that ever glittered to beguile, and dazzled to betray, is agriculture. I speak with feeling on this subject, for I've been glittered and beguiled, and dazzled and destroyed by this same arch deceiver.

She has made me a thousand promises, and broken every one of them.

She has promised me early potatoes, and the rain has drowned them; late potatoes, and the drought has withered them.

She has promised me summer squashes, and the worms have eaten them; winter squashes, and the bugs have devoured them.

She has promised cherries, and the curculio has stung them, and they contain living things, uncomely to the eye, and unsavory to the taste.

She has promised strawberries, and the young chickens have enveloped them, and the eye cannot see them.

She has promised tomatoes, and the old hens have encompassed them, and the hand cannot reach them.

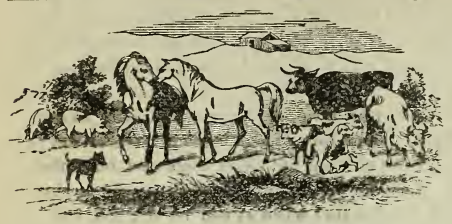
No wonder Cain killed his brother. He was a tiller of the ground. The wonder is that he didn't kill his father, and then weep because he hadn't a grandfather to kill. No doubt his Early Rose potatoes, for which he paid Adam seven dollars a barrel, had been cut down by bugs, from the head waters of the Euphrates. His Pennsylvania wheat had been winter-killed, and wasn't worth cutting. His Norway oats had gone to straw, and would not yield five pecks per acre, and his black Spanish watermelons had been stolen by boys, who had pulled up the vines, broken down his patent picket fence, and written scurrilous doggerel all over his back gate. No wonder he felt mad when he saw Abel whistling along with his fine French merinoes, worth eight dollars a head, and wool going up every day. No wonder he wanted to kill somebody, and thought he'd practice on Abel.

And Noah's getting drunk was not at all surprising. He had become an husbandman. He had thrown away magnificent opportunities. He might have had a monopoly of any profession or business. Had he studied medicine there would not have been another doctor within a thousand miles to call him "Quack;" and every family would have bought a bottle of "Noah's Compound Extract of Gopher Wood and Anti-Deluge Syrup." As a politician, he might have carried his own ward solid, and controlled two-thirds of the delegates in every Convention. As a lawyer, he would have been retained in every case tried at the Ararat Quarter Session, or the old Ark High Court of Admiralty. But he threw away all these advantages and took to agriculture. For a long time the ground was so wet he could raise nothing but sweet flags and bulrushes, and these at last became a drug in the market. What wonder that when at last he did get half a peck of grapes that were not stung to death by Japhet's honey bees, he should have made wine and drowned his sorrows in a "flowing bowl."

The fact is, agriculture would demoralize a saint. I was almost a saint when I went into it. I'm a demon now. I'm at war with everything. I fight myself out of bed at four o'clock, when all my better nature tells me to lie still till seven. I fight myself into the garden to work like a brute, when reason and instinct tell me to stay in the house and enjoy myself like a man. I fight the pigs, the chickens, the moles, the birds, the bugs, the worms—everything in which is the breath of life. I fight the docks, the burdocks, the mullens, the thistles, the grapes, the weeds, the roots—the whole vegetable kingdom. I fight the heat, the frost, the rain, the hail—in short, I fight the universe and get whipped in every battle. I have no more admiration to waste on the father of George Washington for forgiving the destruction of his cherry tree. A cherry tree is only a curculio nursery, and the grandfather of his country knew it. I have half a dozen cherry trees, and the day my young George Washington is six years old I'll give him a hatchet and tell him to down with every cherry tree on the place.

TAPPAHANNOCK WHEAT.—J. Thomson Colton, Esq., of Allen's Fresh, in this county, has sent us a sample of this early variety of wheat. He states that the grain is not near as large as they were last year, but the heads were very full and the yield large, producing about eighteen bushels to the acre. Mr. C. thinks the rice birds, which were in the field in large flocks, must have destroyed nearly two bushels of grain per acre, otherwise the yield would have been considerably more. The wheat was seeded on ordinary tobacco land, without fertilizer or manure, on the 20th of September, and cut on the 6th of June. The weight of one peck of the grain was sixteen and a half pounds, or sixty-six pounds to the bushel, weighed by ordinary counter scales. Mr. Colton attributes his success in raising good crops of wheat, mainly to the great care he takes in cleaning the seed. His practice is also to rid the field of cockle or other foreign plants by pulling them up.—*Port Tobacco Times.*

Live Stock Register.



From the Journal of Agriculture.

WHAT STOCK TO GET FOR OUR DAIRIES, AND HOW TO TREAT IT.

Some people become discouraged often with thoroughbred stock, especially cattle. The reason is, breeding is a trade and has got to be learned, and it requires much care and discrimination.

There is nothing so safe as the native breed—we mean of cattle. There are, or once were, thoroughbreds. When first brought over, they were of good blood, particularly as regards the dairy; and, although they have deteriorated, they have not lost all their good qualities. Besides, people know how to treat them, that is, they know better how to treat such stock than the current high-bred blood, which must be *kept* up.

Little judgment is required with our common cattle; the most is treatment, getting back, bringing up, the good properties. This is done, not by carein breeding—that has already been accomplished—but by mere good usage. Our stock has been run down. So many generations of bad treatment—and only bad—has given us what we have, and the wonder is, that it has not given us worse. There is good constitution, good digestion, and the old habit of milk is not yet lost. It needs but oiling the machinery to get the whole thing running and doing the old execution. This is clearly true, and it is encouraging.

Feed your calf properly—regularly and liberally, but in no caseexcessively. Make a good impression, and continue that impression. Tender grass is good for that, and clover best of all. Of course you bring your calf to grass in good condition, and gradually get it used to it.

Then, your calf must have shelter from the rains, especially the cold rains. It must bed at home, and it will probably do better with company, but not with too much; there must be no annoyance. If a little meal is to be given, give it; but let it be sparingly. It is better to bring your calf to grass hardy and growing and accustomed to eat grass, and largely—*hay* and grass; it will not relish the grass less for the hay it had when it goes into pasture, meadow rather; a close-cropped pasture is not what is wanted; meadow (clover) with the green leaves tender and nutritious, and containing *all* that is necessary to full and rapid growth—not fat; you do not want to fat a calf, or any other young animal, that you wish to grow to maturity. But *grow* steadily and as well as you can—as fast as you can if you avoid the fat.

It is a fine thing to thus treat a calf and bring it up into a cow. You are not only adding the flesh but developing the qualities, the butter principle and the cheese quality.

Make a cow as early as you conveniently can, and you will aid this, the milk principle; and you will establish the habit, and the young animal will grow into it. It will expand in this respect (milk-producing) as well as in others, which it would less, if introduced later.

We have thus a cow, an early cow, costing comparatively little; and we have made her. Now continue the good treatment, feeding and shelter, and your animal will improve half its lifetime, and perhaps a year or two later. We have had them improve till at twelve; and at fifteen they were as good as at twelve—standing still the three years—and then going down, and rather rapidly, the teeth being the main cause.

But, you can improve a badly brought up cow. You can improve her greatly. Indeed, here is your greatest profit. You can buy such an animal reasonably cheap, and you have a wide scope for improvement—not that you can do for the animal what you could have done had you had the charge of it from calfhood up.

But purchase your cows—if purchase you must—and have an eye out to good points; they tell (they need not be enumerated here). And then improve as we have indicated. Let the improvement (treatment) be permanent, uninterrupted. In this way our dairies are made what we now and then see them when the right men have hold of them. In this way our greatest profits are realized, whether the cattle have been bred by us, or purchased and only improved. It matters not so much about the carcass. It is the milk that for ten or twelve years we want, and that is the main and almost the only thing. We can raise our butter cheaper, and make more profit out of it than the English can, so that it is not necessary, or so important, that we have a salable animal in the end. If, however, this may as well be, so much the more gain. But we think it is not so. The best milkers are not the best beef-makers, and *vice versa;* and a small difference in favor of the pail will make quite a difference in the course of the lifetime of a cow. The greatest success we think is found in our American dairies

under such circumstances. At least, high state of success is realized, and we may with safety engage in it. This is probably the better course for the general farmer or dairyman. For the adept in breeding grade stock, or even pure blood, may be better.

Select your stock, treat properly, and in a few years you have a first-class dairy. We speak whereof we know. Nothing is safer than this, in all farming. Nothing brings in more money on an average, to say nothing of the improvement of the land, which is more, if anything, than the rest. It is the easiest and most natural, and therefore the best way to improve land. This we see here in the celebrated dairy districts; land has doubled in value, manurial worth.

Now, with respect to the improvement of stock—the treatment rather—and that our common breed—let us say more particularly that this must be done with care and judgment. The herd must not be herded too close, both summer and winter. This is disastrous more or less, and is seen everywhere. A herd will never do so well as a single cow or a few cows. The stronger *will* hurt the weaker. There is also an influence in the combined breath of a score or two of cows housed in the winter. It matters not what your ventilation is, this is the case. Your ventilation cannot exceed the proper bounds, and therefore the hurt is harbored. We have just read of a car load of stock (sheep and calves) having been suffocated, actually found dead, every one of them, in consequence of a difficulty of this case. But there is the dread of the weaker cow. It is a constant thing, and a constant hurt. Separate, then, the herd. Dispose of the vicious, or set them apart. So with the weaker, especially those that agree. The rest may be kept together if the herd is not large: But do not crowd. Do not crowd in the stable. *Our stables are not roomy enough.* A herd of cows consume a great deal of air in a night; and the effluvia that escapes—from skin transpiration and facces—is immense. In a still warmer air it approaches the case of the car above mentioned. More stretch, larger stalls, this is what is wanted. If it pays to make one cow comfortable, it will pay to make two comfortable; and how high must the figure be that it will not pay to take care of?

The feed, *we* hold, should be not what it is, in the main, the same as the shelter should not be what it is, in the main. Nature prepared various food for men and animals. But she prepared grass as the main food for cattle—as the one food that will answer all the purposes, which it does, and which it has from time immemorial, and which it will, time without end. Of late years hay is the almost, and in quite a number of cases that we know, the exclusive feed for stock in winter—grass in summer, and cured grass in winter. And the stock—of all kinds—thrives the better. Particularly is it the more healthy, and the less expensive. There is no grain to feed in the spring to lift your stock or to keep it from falling, it is still, virtually, in summer pasture. This we have seen; this we know; and others know it; and yet why is it that people *will* adhere to the old uses.

Give good hay, early cut and cured; comfortable winter quarters, with freedom from annoyance, and *clean well-littered* stables,—and there will be no difficulty; stock will do as well in winter as in summer, and better—that is, milch cows will, in the recess of milking. Till up to that time they will furnish a superior article of butter, and a good quantity of it. This is done here. Particularly was this the case the past winter with the excellent hay crop which never was equalled, perhaps, in quantity and quality, in this section. Grain was dispensed with, and stock went into grass in the best condition, after having made "fortunes" of butter. Thus there is benefit early and late in winter, as well as during the summer, while the short term of rest from milk will give chance for increased strength and flesh, preparatory to a renewal of milk.

This treatment would not be a new thing for thoroughbreds, but for the common stock of the country it would; and they would improve accordingly; the thoroughbreds would not. The same objection is not applicable to grades. Give us, then, the natives to *improve* on; this is the experience.—*Herkimer County, N. Y.* F. G.

SPAYING HOGS.

J. J. B. writing to the *Rural Carolinian* on this subject, says. "Hogs to be operated upon should have no food for at least twenty-fours beforehand. I use a stick about one and a half inches in diameter, eighteen inches long, a little crooked in the middle, to prevent it from slipping side to side on pole or rail; on each end of the stick a strong string of soft leather, of sufficient length to make a noose, which is secured to each hind leg above the hock joints, then hang up, and, of course, her head will be down, and so, too, will all the intestines incline down and be out of the way; make an incision about two inches in length in the abdomen, between first and second sets of teats; from hind part of animal, insert thumb and forefinger, when the ovaries are easily found where the womb unites with the body, which are clipped off with a sharp knife. I use in sewing a needle about two and a half inches long, and two or three strands of shoemaker's thread twisted together and waxed with beeswax. I have been at the business for more than twenty years, and do not think I have lost one in a hundred. I pay no attention to zodiacal signs—have been noticing of late, at the suggestion of a friend, and am inclined to the opinion that they bleed *less* when operated on the new of the moon. I never spay in cold weather, but never hesitate on account of heat or 'dog days.' Animals should always have access to plenty of water. Spaying greatly improves the flesh, and they are much easier fattened."

SCIENTIFIC AND THEOLOGICAL ASPECT OF THE HOG.

A writer in the *Chicago Post*, thus expatiates on the hog:

The hog has been in disrepute a long time, at least ever since he began to play his part in the ancient religions. It is fashionable to ridicule and denounce him, to call him a filthy brute, and to insist that he is the dire author of leprosy, consumption, cancer, scrofula, and the most disgusting diseases that afflict humanity. This is the teaching of prejudice, not of science.

The hog outlives all hostility, and laughs, so to speak, at the success of his slanderers. Still is the reeking roast pig the sacrifice of many a dinner table, and still is the rural ceiling festooned with the savory sausage, and the smoke house fragrant with ham. We deal with facts, not sentiment. The hog is a true cosmopolite—a citizen of the world. He increases and multiplies, and inherits every part of the habitable globe. He is as ubiquitous as the bat. He does not stand in high repute for his manners, but he is most accommodating, thriving with equal content in the sty of the rich and the kitchen of the indigent. He wallows sometimes, but naturalists tell us he does this for the sake of cleanliness, which is next to godliness—for the same reason that the Pacific Islanders grease themselves. Among his quaint peculiarities are his grunt of satisfaction and his squeal of remonstrance and reproach. He should never be fed till he stops his squealing; it is the approved method of breaking him of the habit.

Homer, in his "Odyssey," honored the swine keeper with the confidence of Ulysses, and why not? The hog, called stupid, is really one of the most enterprising and sagacious of animals. The gamekeeper of Sir Henry Mildway actually broke a black sow to hunt game in the woods; and she ran in the hunt with wonderful success. She would track game, back and stand, and point patridges, pheasants, snipes, and rabbits as skilfully as a bred pointer. She would bound in response to a whistle, and would wag her head and squeal with delight on being shown a gun.

The babylonian Talmud says: "Cursed be he that breedeth hogs;" and the history of the Maccabees tells us that the scribe Eleazer walked straight to the tortures of persecution rather than eat a slice of spare rib, heroically preferring the martyr's stake to the pork steak. This animal has been under the ban of many religions. The Mohammedans learned rom the Jews, as the Jews had previously learned from the Egyptians, to hate him because he perfversely declined to "chew the cud;" but he still manages to masticate and digest considerable pottage in the course of a year.

The hog is the product of nature's most economical thought. There is no part that cannot be utilized. His flesh, fat, bristles, hair, hoofs, and bones are all turned to account. "The divisions of his unctuous body," says Apicius, "are as familiar as the division of the earth. His ears and feet go to souse; his brains are a choice dish for the epicure. His tail has for ages been claimed by successive generations of children as their particular property. Tradition points out how to appropriate it; roast on the coals, take in the fingers, and eat without salt."

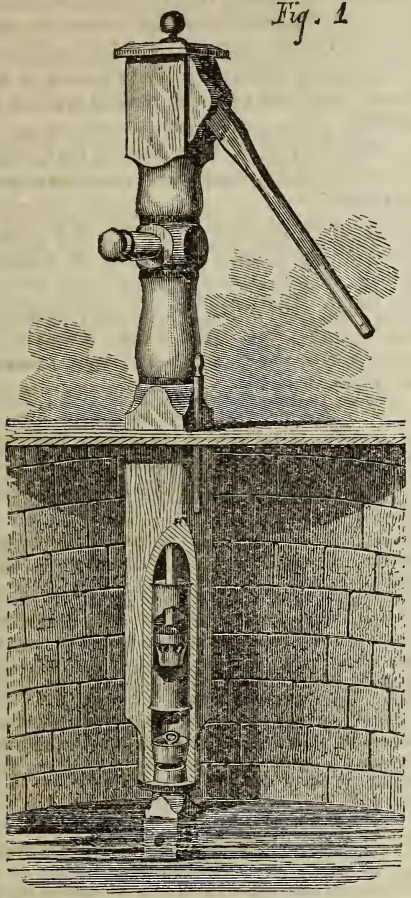
The hog is the staff of life, the arch enemy of famine, the poor man's best friend. Moreover, in his earlier days, he is strikingly playful, frisky, cunning, and graceful—as much more interesting than a human infant of the same age as the latter is more interesting than so much putty. In adult pighood, he is omnivorous and self reliant, bold and expeditionary, and he breeds faster and keeps cheaper than any other domestic animal.

America is pre-eminently the home of the hog; he is a legical deduction from Indian corn. He was introduced into Virginia in 1600, and here he multiplied so rapidly that the colonists were compelled to palisade Jamestown—high, to keep out the Indians; close, to keep out the hogs. Mrs. Hog can produce ten to twenty at a birth, as often as twice a year. The descendants of a single pair—allowing six young for a litter—would amount to six million in fifty years. The gratitude of the country is due to Cincinnati, for that, by assiduous harvesting, she keeps down the inundation which constantly threatens to overwhelm us in an uncommon ruin.

Buckwheat as a Renovating Crop.—Some years ago farmers in this region experimented considerably with buckwheat as a manurial crop. It was thought it might be sown to advantage on a summer fallow where clover had been turned in, and another grown to enrich the soil. Its use for this purpose has not been continued and never spread extensively. The results were not favorable.—Buckwheat seems to sour the land; it imparts substance to it which is not favorable to grain growing. Where clover can be grown no other green crop is needed for enriching the soil. It is a coarser plant than clover and will grow under more unfavorable conditions, on colder and wetter land, and might be used in localities where clover will not thrive as a crop for ploughing under. Another objection to the use of buckwheat is the difficulty of ridding the soil of it when it has once seeded on a field. It is tenacious enough of its foothold to be called a weed.—*Rural Home.*

FLEXIBLE METAL LINED AND WOOD PUMPS.

Fig. 1



It is well known that the gradual wearing of the bore and the frequent renewal of packing the plunger requires, are serious objections against the common wooden pump. All these objections we successfully overcome by introducing into the pump a metallic spring lining, made of galvanized iron, copper or other suitable material. The top and bottom of this lining (which is of sufficient length to give a bearing surface for the plunger,) are turned out like the mouth of a trumpet and forced into the wood. This holds the lining firmly in its place, at the same time the vertical joint is so constructed that it allows the spring lining to expand and contract with the shrinking and swelling of the wood, so that it always fits the bore of the body of the pump. This gives a smooth surface for the plunger to work in. The plunger also has been greatly improved, and is the most perfect wooden plunger in use, combining the greatest strength, durability and simplicity. The joints which connect the pipe to the pump and the couplings to connect the pipe are made tapering, which secures not only a permanent and perfect fit, but a fit the whole length of the joint instead of as in the old method, an imperfect and short contact.

The length of the pump is such that the working parts are placed below the reach of frost in the coldest weather, the water being vented just above the bucket, so that although the upper part of the pump is freed from water, the working parts remain immersed, and no priming is required in starting.—These improvements are so cheaply applied that the cost is but slightly increased over that of the old style wooden pump. For sale by E. Whitman & Sons, agents for Maryland.

SEWERAGE IN SANDY SOILS.

The Army Sanitary Commission has recently furnished to Dr. Cunningham, Sanitary Commissioner with the government of India, some very interesting replies to a series of questions, which at their request, he framed when in England two years ago. Sandy soils are usually regarded as healthy, and frequently they are so; but under certain circumstances they are attended with dangers to health, which have been clearly pointed out by the Army Sanitary Commission. Sand absorbs sewerage and foul water with as much facility as it does pure rain-water, or pure river-water. This absorbing power of sand has led to most serious results to health when feeders have been conducted over its surface for supplying pure water to a town or station from a river or stream, even at a considerable distance. In instances of this kind, the first indication of danger in warm climates has generally been, not dampness of subsoil, but severe outbreaks of epidemic diseases. Pure rain-water itself will even become foul water before it enters the sand if it falls on refuse filth, or other decaying matter left on the surface. Some most severe outbreaks of epidemic diseases have taken place in dwellings built on sandy soils, and have been traced directly to the foul state of the surface and subsoil from cesspits, or from dirty water, or sewage draining into these porous soils. Whether subsoil drainage—the point discussed—should be adopted, will depend, in case of sandy, as well as of other soils, entirely on the manner in which the surface is used. The need for subsoil drainage, we are told, must be decided irrespective of the local geology. Wherever the subsoil does not free itself rapidly from moisture after rainfall, there should be subsoil drainage.

The Cotswold is a large, fine mutton sheep, and will shear from ten to sixteen pounds of wool. The carcass often weighs over two hundred pounds at two years old; and will be worth several cents more per pound than the common breed.

ENGLISH AGRICULTURE.

History of a Clay Farm--Plowing by Steam--Anglo-American Ideas--A Farm Chemist--How it All was Made to Pay.

A late letter from Charles Barnard, the well-known practical minded *litterateur* to the *New York Evening Post*, gives the following interesting account of one of the most original as well as characteristic and practically successful farming experiments of our time. The letter is dated London, June 26th:

The old-fashioned farming of England does not differ greatly from the common farming of the northern United States. The crops are slightly different, the buildings very different, but the various farm processes are nearly identical. Plow and sow and reap—they mean the same in both countries. When we come to the young farmers everything is changed. Science and brains are coming to the aid of the toiling hands, and farming is about to enter upon a new, more honorable and, if possible a more useful stage. It is becoming an art, and young men of culture and capital are preparing to win the golden rewards that rightfully belong to that first of all professions—agriculture.

As to which leads in high farming my opinion is that America, if not leading, is destined to lead. As this is not of the slightest consequence to us we will drop it. Let us, for our own benefit, examine what our cousins in the front rank of modern farmers are doing.

CITY FARMERS

These gentlemen farmers, with their chemists and steam plows, are making a deal of stir in England. The sturdy old toilers, born and brought up on the soil, gaze with scorn upon their snorting engines and bags of phosphates. "Oh! he'll fail soon. He does not do as his grandfather did, and he'll soon see the end of the land and his money."

Wait a bit. Seems to me the crops on the city man's farm appear very respectable. Let's have a good look at the place and its produce. Taking the railway let us run into the county of Hertford and visit a remarkable farm in the town of Sawbridgeworth. On leaving the cars we pass through a fine farming district. Of the exquisite beauty of the landscape, and of the picturesque old farmhouses, we have nothing to say. Photographs have made both familiar. We will only remark, in passing, upon the excessively disagreeable surroundings of all the rural dwellings, and upon the pretty but absurd English hedges. How the farmer's wife can allow her visitors to approach the door through such a slough of barnyard offenses is past finding out. In America we at least thrust the barn, with its sights, sounds and smell, out of sight, and do not leave it before the parlor window. As for the hedges about which so much poetry has been wasted, they are a blunder—a nest for vermin, the home of the weeds and a bar to good culture.

AN ENGLISH FARM.

Ah, now we reach something different. Coming out of the close and narrow lanes we enter a new country. The high hedge that entirely shut out the view gives place to a sensible two-feet-high railing, or stone wall, and the country spreads out wide and smooth on every hand. We are now approaching the centre of a farm of four hundred and fifty acres. Yonder is the dwelling house, with its group of barns. Evidently the owner of this place is in advance of his neighbors. We reach the picturesque old house, with its red tile roof and lattice windows, and ask permission to see the place.

The owner, Mr. John Prout, of London, is not at home. The foreman, a very intelligent young man, appears.

"Like to see the place? So you may with pleasure. From America, I suppose? Glad to hear it. Mr. Prout lived in Canada six years. He was a farmer there."

That accounts for things. The barns and outbuildings are upon American plans, and much better than the thatched absurdities of England.—Though they do stand unpleasantly near the house, yet they have been evidently remodeled upon new ideas. Crossing the yard we enter a stone house, and the young man shows a huge pile of crushed bones and a number of bags of super-phosphates and other chemicals.

We go out upon the farm. Next the entrance gate is a field of wheat; fifty-five acres—one smooth square of growing wheat. The heads, just appearing, glisten in the warm sunlight, and the plants stand tall, thick and even, a triumph of agricultural science. Never in America or England have I seen such wheat. I do not dare to say much about it, for fear you will think me indulging in "travelers' tales." The color of the foliage was something remarkable, and the size of the straw marvelous. From the wheat we pass through all the six fields into which the place is divided. With the exception of about forty acres of clover (injured by last summer's drought) the appearance of the land and its growing crops was something almost past description. Success had crowned this farm, if no other.

Standing near the farmhouse, the entire place can be seen at a glance. Not a hedge marred the estate. The only divisions were by the road where the steam-engine traveled, and the open drains where the underdrains discharged themselves.

HISTORY OF THE FARM.

The character and history of the farm was given me, in part by the foreman and in part by Mr. Thomas Rivers, the well-known nursery man, who lives in the same town. The farm is what is called by the local geologists a "boulder clay." It contains some chalk, and was probably at one time the bed of an old lake. This, I think, is correct. It is a real clay farm. It has been occupied for a long time. Fifty years ago it was cultivated upon the "crop and fallow" system. Little manure was used, and when its present owner came in possession it was considered a wornout, valueless clay-bed.

The new owner's first operation was to remove all the hedges. Eighteen acres of land were at once added to the estate. Beyond this fact comment on English hedges is unnecessary. Next, every rod of ground was underdrained. These tile drains were put in much thicker and steeper than usual. Roads were laid out radiating from the buildings in the centre. These divided the place into six fields. Upon these roads the traction engine travels when at work plowing or cultivating.

THE STEAM PLOW

used is of the Fowler pattern, and works upon the "single engine plan." This steam plowing business is one that deserves careful examination. Concerning the various methods of steam plowing I cannot now speak. At present we will content ourselves

with the actual work done on this farm, and leave the rival Howard and Fowler systems to another time. Traction engines, for farm work, must also be discussed hereafter.

At present it is enough to know that this engine is a traction engine, that is, moves itself like a locomotive. When plowing or harrowing is to be done, steam is started, the engine rolls out of the barn and proceeds leisurely to the field, dragging after it a train of wagons containing the plows, ropes, &c. The working force consists of three men and three boys. The engine takes up its station on the road, at one end of the field. The plow, with its four shares, is run on to the land, beside the engine, and facing away from it at right angles. The wire rope is carried to the opposite side of the field and passed through a block, on a movable anchor, having disc wheels that cut into the ground at the headland The rope is connected with the plow and with the drum under the engine. The engineer mounts his locomotive. The man at the anchor stands ready to move it as the plow cuts its wide path through the soil. The assistants take their places along the ropes with iron frames, over which it runs to prevent friction, and the plowman mounts his strange machine. This is a pair of wheels, having two huge iron arms, each containing four plows, each set facing the other. The plowman, the foreman of the gang, waves a white flag to start. The engine puffs lustily. The ropes tighten and groan. One arm, containing four plows, sinks into the ground, while the other, slightly elevated in the air, goes backward in front. The dust flies, and with tremendous force the soil is plowed up and turned completely over to a depth of six inches, and at a speed of an acre an hour. As the plow goes tearing through the land, the boys remove the "porters" over which the rope runs, and replace them as the plow passes.

A wave of the flag and the engine slows down. Another signal and it stops with the plow at the opposite side of the field. The plowman changes his seat, the anchor is moved slightly, and the engine starts forward a few feet. The flag waves, the rope tightens, and the plow starts on its return journey, making four new furrows.

ADVANTAGES OF MACHINERY.

With these truly splendid means the land is plowed, subsoiled or harrowed at a very rapid rate. Harrowing is performed at the rate of twenty acres or more a day. The exact figures in regard to plowing I will give in due time.

For depth, cheapness and thoroughness of culture machinery leads everything. Its advantages on large farms are too great to need discussion. For the prairie farmer, and especially the man who can command a water-power, this system, or something like it, presents many features worthy of imitation. Should it happen that a farmer has a water-power in the centre of his place, a slight modification of the rope and blocks, so that the motive-power need not move, would enable him to cultivate a large farm with a single water wheel. In spite of its high first cost, steam or other power beside horses is destined to do all our heavy farm work. Steam is being rapidly introduced into English farms, and not alone for plowing. The crops can be handled, thrashed, stored and prepared in various ways for market, by steam. The same engine that plows the land can drive the root-cutter, saw the wood, pump water, hoist the hay to the lofts, run the grain elevators, or drag a dozen loads to market at once along the country roads.

A CHEMICAL EXAMINATION.

To return to our clay farm. After the first thorough tearing and clearing up of the place had been accomplished, the next thing was to have a careful chemical examination made of each field. In fact the chemist is retained, and makes regular reports upon the soil. Upon these reports the manurial practice is founded. This, I was told, excited at first the greatest amusement among the neighboring farmers. Now they rub their sleepy eyes and admit that the chemist is one of the best men on the farm.

The crops were put in entirely by machinery. As far as possible steam was employed, and their horses have followed the engine. None of the tiresome hand labor followed about London was allowed. The first four crops were comparatively small, and did not pay. Soon they began to improve, and continued improving until last summer, when the largest crops ever known to be gathered in the county were cut from these unmanured fields; that is, fields not supplied with barn manure. The only manure used was from the bone mill and the chemical works.

DISPOSING OF THE CROPS

is peculiar. Just as the various fields are in their best condition, they are divided into lots of ten acres each, and then offered at auction as they stand. A large company assemble, and, after a liberal free lunch, the auctioneer proceeds to sell every available thing on the place without reserve. Every crop must go if a decent price can be touched. Bidding is active, and in one day the harvesting and marketing are over. Each purchaser pays down twenty per cent. and has credit for ninety days for the rest if he wishes it. The crops may be removed at the buyer's convenience, provided he does not interfere with the farm work. By this means all expense and risk of harvesting, storing and marketing are saved to the owner. Whether this pays the following must show. This statement (reduced to dollars,) from the books of the farm, was kindly given me by Mr. Prout himself, at his city residence:

For labor, $4,650; for seed, $1,250; manures, $5,750; interest on land, improvements and building and taxes, $5,600. This is the cost for one year. The sales each year averaged in the last four years the sum of $23,000 Taking the yearly cost from this we have an annual profit of $5,750. Mr. Prout is well known in London. These facts and figures have been published again and again, and are beyond question correct.

Four years since the Royal Agricultural Society, hearing of this farm, sent a grand committee to examine it. They did so, and solemnly reported that such a farm would certainly fail. The entire removal of the crops each year, and no return in the usual way, would sink anything. The proprietor was destined to fail. Ruin would visit the place shortly. The above statement looks like it—very.

This place is certainly a most remarkable one.—Ten years ago it was estimated to have a rent value of twenty-seven shillings to the acre. In four years its rental value had risen to forty shillings per acre. At present it is higher still. The cost of clearing the hedges paid for itself in eighteen acres of new land, and several hundred dollars' worth of lumber beside. The present cost, with clear fields and steam

power of the sixteen-inch culture, is the same as the five-inch culture of ten years ago.

DOES FARMING PAY?

It may be well to add that the first four crops had no manure of any kind. The increased culture consequent upon steam power brought up from disused soil below sufficient materials to sustain the crops. Weeds were a serious trouble at first, and "fallowing" was resorted to in a measure. Within the last five years the land has been free of weeds, and, having at great expense been really cleared, is kept so easily.

In conclusion, I may remark that the proprietor carries on this farm partly as an experiment to solve the vexed question, does farming pay. Furthermore, being a man of liberal instincts and culture, he publishes freely what he has done, that the perpetual cheap food question may have one more solution. His aim is to show that capital, science and skill when applied to farming not only benefit the farmer, but indirectly aid and comfort every man, woman and child in the United Kingdom.

American Soils.

A writer says: The deterioration of American soils has for a number of years past been the subject of warm discussion with agriculturists, and the conclusion has been reached that unless a different system from that heretofore pursued is adopted, the products of the cultivated acres of the country will not more than be sufficient to feed our own population. The value of manures appears to be but imperfectly understood by American farmers generally, the impression prevailing in most of the better agricultural districts, that it is next to impossible to exhaust their fertility.

The continually decreasing crops completely explode this opinion, and the efforts of scientific men are being energetically directed towards the dissemination of more rational ideas. Were the same system of cultivation pursued in the United States as in China, we should be able to supply all the nations of the earth with food. The Chinese, according to late writers, who have closely investigated their system of farming, are unquestionably the best agriculturists and horticulturists in the world. Not a particle of manure of any kind is allowed to go to waste. Every portion, however minute, is jealously husbanded and applied to the soil. The result is that the whole country, so far from being worn out or exhausted, is as fertile and productive as it was in the days of Confucius, thousands of years ago. American farmers might well take lessons from the Celestials in regard to the cultivation of the earth.

It should be known to breeders that from the time of birth up to maturity, colts require food abounding in flesh-making principle, nitrogenous compounds, oats, corn, &c.; otherwise they must necessarily be deficient in size, symmetry and powers of endurance.

Horticultural.

CULTIVATING YOUNG ORCHARDS.

Among the varieties of practice and opinion about agricultural and horticultural operations, says the *Practical Farmer*, it is desirable to have occasionally something settled, so that *a rule* can be established applicable in all situations and under all circumstances. Such we consider now to be the expediency of cultivating and keeping constantly stirred the soil in orchards recently planted, and to continue this for six, eight or ten years, till the trees get strong roots, and able to take care of themselves. After this period, and varying according to circumstances, it may be sometimes proper to lay down to grass, and keep up fertility by top-dressing.

We give the following as the practice in peach orchards, of two noted and successful peach growers in Delaware:

"Mr. CUMMINGS says: 'You may raise some crops on the vacant land till the trees and plants begin to yield their fruits, but after that the land ought not to be taxed with anything other than the intended crops. The trees, etc., should be manured and limed to keep them in heart, and the ground cultivated like a garden, that no weeds or grass may interfere with the orchard. I plough my orchard, harrow, and cultivate—the latter process three and four times every summer, when I lay it by.'

"Mr. FENNIMORE says: 'My long experience has taught me that all vegetables, from the very smallest to the greatest, small fruit and fruit trees, require the very best and constant cultivation in due season; not to suffer small grain, and particularly white clover, to grow around the roots. As the trees come into bearing, it is very necessary that some stimulating manures should be applied.

"Leached ashes are probably the best fertilizer you can get—150 bushels to the acre; the next best is well-composted manure. In all cases plough shallow: the feeding roots are all searching moisture, and the best soil. Therefore, as the roots work for the surface, where the manure is, if you plough deep you destroy the feeding power."

TO SAVE GIRDLED TREES.—A. Dwinell, of Walpole, N. H., writes to the N. Y. Farmers' Club: "Three years ago the present spring I found that one of my largest and finest apple trees was girdled. The bark was gnawed entirely off close to the ground to the width of about four inches. I immediately banked the tree with clayey loam to the height of ten or twelve inches, stamping the dirt firmly around the gnawed spot. The tree at the present time is as thrifty as any in the orchard. It has borne two fine crops of fruit since it was injured, and no signs of decay have been apparent."

KEEP THEM OFF.

The best authority known to the people of the United States, Chas. Downing of Newburgh, N. Y., who has spent a long lifetime investigating the subject of fruit-culture, with all of its branches, recommends, as *one* of the best, if not the *very best* means of keeping apple, pear and quince trees, from being injured by that ever vigilant enemy the *apple borer:* "That the earth be drawn away, to the depth of two inches, from about the tree; and having dug out or otherwise killed those already in the tree, to bind about the tree strong, heavy paper—hardware paper made of tarred rope is the best—a foot high, held there by good twine, then replace the earth."

It would be well to wash the tree just before putting the paper about it, with a strong ley, soft soap, or a solution of two pounds of potash to a pail full of soft water. We can see in the use of the paper here spoken of, the means of keeping the apple tree borer off, from the field of his most successful operations. It is a preventive, and in *prevention* in such matters, an ounce is far better than a pound of *cure*. It has the merit of cheapness, simplicity and ease of application. A little thoughtful attention once a year, will secure your trees from one of the worst enemies.—*Pleasant Valley Fruit and Wine Reporter.*

Death to Bugs —The following recipe for destroying bugs on squash and cucumber vines has been successfully tried for years. It is certainly worth a trial:

Dissolve a table-spoonful of saltpeter in a pailful of water; put one pint of this around each hill, shaping the earth so that it will not spread much, and the thing is done. Use more saltpeter if you can afford it—it is good for vegetables, but death to animal life. The bugs burrow in the earth at night, and fail to rise in the morning. It is also good to kill the grub in peach trees; only use twice as much, say a quart or two to each tree. There was not a yellow or blisted leaf on twelve or fifteen trees to which it was applied last season. No danger of killing vegetables with it. A concentrated solution applied to young beans makes them grow wonderfully.

Grub in Peach Trees.—Examine the roots of the peach trees a few inches below the surface of the ground. If gum exudes, the grub is certainly at work under the bark. Dig it out at once. Should you chance to see a copper colored substance exuding from the stem of an apple tree, a borer may be found there also.

The Cotton States Mechanics and Agricultural Fair Association will hold its annual exhibition at Augusta, Georgia, commencing 31st of October, 1871, and continue five days. The premium list is on a very liberal scale, and can be had by addressing E. H. Gray, Secretary, Augusta, Ga.

The Purification of Water.

Pure water is justly regarded as one of the most important subjects now attracting the attention of the public, and, as a consequence, inventors all over the country are devoting special attention to the construction of filters for effecting this object. The subject is a purely chemical one; and, as few of our inventors are chemists, it is not to be wondered at that a good deal of confusion exists in the public mind in regard to the subject. It should be remembered that the impurities that exist in water are of two kinds—those in solution and those that exist in a solid form. The former consist of various earthy salts and soluble organic matters; the latter may consist of earthy and sandy particles, the solid debris of animal and vegetable bodies, and living organisms from both the lotter kingdoms. It is the solid matter alone that can be removed by the small filters in common use, in which the porous material consists of paper, sponge, flannel, porous stone, sand, etc. Sand, if used in very large quantities, would remove soluble matter as well as that which is insoluble; but on the small scale it exerts an action that is merely mechanical.

Best Time for Painting Houses.—The best time for painting the exterior of buildings is late in autumn, or during the winter. Paint then applied will endure twice as long as when applied in early summer or in hot weather. In the former it dries slowly and becomes very hard, like a glazed surface, not easily affected afterwards by the weather, or worn off by the beating of storms. But in very hot weather the oil in the paint soaks into the wood at once, as into a sponge, leaving the lead nearly dry and nearly ready to crumble off. This last difficulty, however, might in a measure be guarded against, though at an increased expense, by first going over the surface with raw oil. By painting in cold weather, one annoyance might certainly be escaped; namely, the collection of small flies on the fresh paint.—*Technologist.*

Protecting Roofs from Fire.—The *Firemen's Journal*, which ought to be good authority on such matters, says:—A wash composed of lime, salt and fine sand, or wood ashes, put on in the ordinary way of withewash, is said to render the roof fifty-fold more safe against taking fire from falling cinders or otherwise in case of fire in the vicinity.—It pays the expenses a hundredfold in its preserving influence against the effect of the weather; the older and more weather beaten the shingles, the more benefit derived. Such shingles are more or less warped, rough and cracked. The application of wash, by witting the upper surface, restores them to their original or first form, thereby closing the spaces between the shingles; and the lime and sand, by filling up the cracks, prevents it warping.

Grape Culture.

PLANTING AND PRUNING VINES.

The distance apart which is best to plant grape vines, and how to train and prune, are inquiries of interest to all who are engaged in vine culture to any extent. The comparative newness of the business to our people, is the why of it. The distance to be observed in planting, we think, should depend upon the strength of soil, kind, and location or latitude. Strong soil, strong or free growers, and southern latitude, will require wide planting; and poor soil, naturally poor or small growers, north, closer. Free growers on strong soil, north, wide planting. A little practical good sense applied in this, is better than blind following of authority without it. How to train, whether high or low, on trellises or stakes, needs more reason than books for an answer. Training and pruning have an intimate connection, practically. Prune so as to distribute the growth over allotted space. Train so as to second this, and to equalize the circulation or flow of sap. Free growing kinds need training so as to give more restraint to circulation. Permanent horizontal arms are good for them, with long spurs, for a reason given in another article. The Diana is an example of this kind. The Delaware has closer, harder wood. On ordinary soil it does very well pruned by renewing annually the arms, brought down to the lower wire or slat of the trellis.—*Am. Rural Home.*

Grape Grafting.—Although some persons are almost uniformly successful in grafting the grape, and claim some advantage in it in the way of time, we never could see enough in it to recommend it to our readers. We found that where one succeeded in getting the grafts to grow and do well, three or four would fail. Grapevines grow fast enough, and are cheap enough to plant young vines. Even cuttings frequently make two or three feet of wood the first season, and by transplanting the following year they often fruit the year after. The gain here is in having a young root instead of an old one, giving assurance of a longer life, and probably of larger bunches.—*Germantown Telegraph.*

Sulphur to Prevent Rot in Grapes.—A correspondent of the Cincinnati *Gazette* says that he has used sulphur for more than twenty years, with benefit, to prevent rot in grapes. Rot is not caused by a fungus, as some suppose, but by an insect, which punctures the grapes probably for the purpose of depositing its eggs. Upon this discovery is based the sulphur remedy for the rot, as sulphur is distasteful to all the insect tribe. Fumigation with sulphur in the evening is better than dust, as the insects work at night.

Pruning Grape Vines.

In regard to vine pruning, Mr. D. Thomson remarks that, according to his experience, tested over and over again, the spur yields a larger but less compact bunch, more likely to shank than the hard produce of the wood closer home, which yields a more compact, neat, and serviceable bunch, and generally with larger berries and stiffer foot-stalks than the larger buds farther up the shoot. I hold it to be wrong, he says, to judge of the produce of a vine by the size of the bunch. The aim of the family grape grower is fine berries, and compact, moderate-sized bunches in great numbers. Tested by family usefulness, and commercially by the demand of the market, the smaller and compact bunch takes precedence of the big bunch. If serviceable bunches are wanted, he advises to prune back to one bud; but if larger, looser, and less serviceable bunches, then cut to the fourth or fifth bud.—*Florist and Pomologist.*

Grafting Grapes.

At the recent meeting of the Horticultural Society of Western New York, D. S. Wagener, who has had much experience and success in grafting the grape, gave a description of the mode which he adopts. He grafts from early spring till the last of June. The grafts are cut early the previous winter and packed in sawdust. He grafts a little below the ordinary surface of the ground, and covers with earth. The moisture of the soil is preserved by two inches of mulching. The cleft is sawn in without splitting. He has set the Delaware on Isabella roots with good success, and in one instance had a crop of grapes the same year. A strong stock is desirable, such as Isabella, Catawba and Diana. The Rebecca does better on a strong stock than on its own roots. In addition to this statement, Dr. Farley, of Union Springs, informs us that he finds the Iona greatly improved by grafting, and he has shown us fine bunches of this variety, more handsome and compact than any we have seen from Iona vines on their own roots.

Tanning Sheep-Skins with the Wool on.—About every six weeks we have an inquiry as to the best method of tanning sheep-skins with the wool on, for use as door-mats, rugs, &c. Here are the directions: Tack the skin upon a board with the flesh side out, and then scrape with a blunt knife; next rub it over hard with pulverized chalk until it will absorb no more. Then take the skin from the board, and cover it with pulverized alum; double half-way over with flesh side in contact; then roll tight together and keep dry for three days, after which unfold it and stretch it again on a board or door, and dry in the air, and it will be ready for use.—*American Artisan.*

The Florist.

FLORICULTURE---FOR AUGUST.

PREPARED BY JOHN FEAST, Florist, Baltimore.

The past month has been favorable in general for plants; moderate, and not so scorching as to dry them up as some seasons—frequent rains to refresh and keep them healthy. Now is a good time to go over and repot all flowering plants; it gives them a chance to be well rooted before the fall. Cut back such as are grown too tall; indeed, all plants intended for winter blooming are better to be pruned. Except *Camelias*, *Azaleas*, and such as have already formed buds, persons in general are too afraid of cutting plants, they would rather see a tall, slender plant, than one of a bushy appearance, otherwise we would see finer and better specimens in every collection; the shape of a plant adds to its beauty. Now is a good time to sow seeds of *Primroses*, *Calceolarias*, *Cinerarias*, and others for spring bloom, and later in the season sow again. Head down *Geraniums* and *Pelargoniums*, to give them shape. Keep them rather dry until they show signs of growth. Inarching *Camelias* may be done yet, if not done previous. Cuttings of *Helietropes*, and such soft wooded plants, may be put in now if a fresh stock is wanted.

Gloxinias, *Caladiums* and *Orchiads*.—Keep in a shady and temperate situation; they pay well for all the labor bestowed on them, with their beautiful flowers the entire summer months. Budding of *Roses*, *Orange* and *Lemon* trees may be done at this time, if the season is not too dry. *Dahlias* will now begin to grow; have them tied carefully to rods, to secure them from being broke by the wind. *Carnations* and *Pinks* may now be layered, and *Clematis* of different kinds, if layered down, will root by fall. *Hyacinths* and *Tulips* should now be taken up, if not already done, and dryed well before putting away, and in fall should be planted again. Nothing particular is required at this season, except as mentioned; but go over all the plants, tender and hardy, repot such as need larger pots, and give fresh drainage to those that don't require larger pots; this keeps plants in a thriving condition, as nothing is more injurious than being in a stagnant condition for want of drainage.

CHANGING THE COLORS OF FLOWERS.—The *Mirror of Science* says, that a case is known of a yellow primrose, which when planted in a rich soil, had the flowers changed to a brilliant purple. It also says, that charcoal adds great brilliancy to the colors of Dahlias, Roses and Petunias; carbonate of soda reddens pink hyacinths and phosphate of soda changes the colors of many plants.

TRANSPLANTING ROSES.—Spring is the best though it may be done in October. All the leaves should be stripped off, the shoots pruned closely, and plenty of water given them. Any time after the terminal buds are formed and before the buds start in spring transplanting can be safely done.

FLORICULTURAL HINTS IN A SMALL WAY.

Plants of roses, verbenas, recently set out, are sometimes prevented from rooting, by being blown about by high winds. This can be prevented by proper staking and they should be tied to the stakes, if necessary. Bass matting is soft, and most suitable for this purpose.

Roses and dahlias, so soon as off full bloom, and beginning to fade, should be clipped from the bush with a pair of scissors. Plants are more exhausted by flowers being allowed to mature the seed, than by blooming merely.

Soapsuds should be saved on wash-days for applying to roses especially, also to geraniums and other flowering plants. It is a capital fertilizer.

In watering in dry time, the earth should be carefully drawn away from the base of the plant, and the water poured around the stem in the hollow. This should afterwards be leveled off with fine earth, so as to leave the dry soil on top, which avoids a baked surface, and leaves the soil more open to the atmosphere, and is better on every account.

In times of drought, dews are often heavier, and can be made most available to both the vegetable and flower garden, by frequent stirring of the soil.

The best remedy we have found for the rose slug, which so often skeletonizes the whole bush is a strong solution of carbolic acid soap applied with a tin garden syringe. Deluge the plant, both upper and under side of the leaf.—*Practical Farmer*.

WINDOW PLANTS.—The *Gardener's Monthly* says that a temperature 55 degrees will give more flowers to the common window plant than a higher temperature, and names such old fashioned sorts as Mignonette, Sweet Alyssum, Zonale Geraniums, Cupheas, Fuchias, Violets, Roses, Chinese Primrose &c., as among the best for this purpose.

MIXED FARMING.—The *Farmer's Herald* (Chester, England,) forcibly says—"Mixed husbandry is needful to realize the full amount of profit which the farm properly managed will yield. Every year the price of farm products varies—some will be high and some low, and thus the farmer catches good prices for a part, if not all; whereas, if he is wholly dependent upon one kind of crop, he may be wholly disappointed. A little sold of everything makes a muckle, and if one thing does pay, another will.

Ladies Department.

A WOMAN'S ANSWER TO A MAN'S QUESTION.

Do you know you have asked for the costliest thing
Ever made by the Hand above?
A woman's heart and a woman's life—
And woman's wonderous love?

Do you know you have asked for the priceless thing,
As a child might ask for a toy?
Demanding what others have died to win,
With the reckless dash of a boy?

You have written my lesson of duty out—
Man-like have you questioned me—
Now stand at the bar of my woman's soul—
Until I shall question thee.

You require your mutton shall always be hot,
Your socks and your shirts be whole;
I require your heart to be true as God's stars,
And as pure as His heaven your soul.

You require a cook for your mutton and beef;
I require a far greater thing;
A seamstress you're wanting for socks and for shirts,
I look for a man and a king.

A king for the beautiful world called home,
And a man that the maker—God—
Shall look upon as He did on the first,
And say "It is very good."

I am fair and young, but the roses will fade
From my soft young cheek one day—
Will you love them 'mid the falling leaves
As you did 'mong the bloom of May?

Is your heart an ocean so strong and deep,
I may launch my all on its tide?
A loving woman finds heaven or hell
On the day she is made a bride.

I require all things that are grand and true,
All this that a man should be;
If you give this all, I would stake my life
To be all you demand of me.

If you cannot be this—a laundress and cook
You can hire and a little to pay;
But a woman's heart and a woman's life,
Are never won in that way.

A FEW HINTS.

Water can be kept cool for drinking in warm weather by the following method:—Get fresh water, let it be kept in an unglazed earthenware pitcher wrapt around with two or three folds of coarse cotton cloth kept constantly wet. The theory of cooling water in this manner is the absorption of heat from it, by the evaporation of the moisture in the cotton cloth—expansion produces cold, compression heat.

A French chemist asserts that if tea be ground like coffee before hot water is proured upon it, it will yield nearly double the amount of its exhilarating qualities. Another writer says, if you put a piece of lump sugar, the size of a walnut, into a teapot, you will make the tea infuse in half the time.

Wire clothes lines are getting to be used by all persons who have found out how much superior they are to the common rope. We have had one in use more than a year. It is never removed, and if the supporting posts are firm there is no sagging. Of course it must be galvanized wire about the thickness of that used for telegraphs.

Borax is said to be superior to everything else for exterminating the cockroach. The smell, or touch of borax, it is said, is certain death to them.

To color a floor—to a strong lye of wood ashes, add enough copperas for the required oak shade. Put this on with a mop, and varnish afterwards.

The French has discovered that the white of an egg given in sweetened water is a sure cure for the croup. The remedy is to be repeated till a cure is effected.

Grease can be removed as follows:—Put on powder of French chalk, and place a piece of blotting paper over it; then pass a hot iron over the blotting paper. The heat liquifies the grease, the chalk absorbs it, and the excess of grease is absorbed by the blotting paper.

Corn-starch makes the best paste for scrap-books. Dissolve a small quantity in cold water, then cook it thoroughly. Be careful and not get it too thick. When cold it should be thin enough to apply with a brush. It will not mould nor stain the paper. It is the kind used by daguerreotypists on "gem" pictures.—CARRIE, *in Germantown Telegraph.*

THE HUSBAND.

Ladies sometimes do not value their husbands as they ought. They not unfrequently learn the value of a good husband for the first time by the loss of him. Yet the husband is the very roof-tree of the house—the corner-stone of the edifice—the keystone called home. He is the bread-winner of the family—its defence and its glory—the beginning and ending of the golden chain of life which surrounds it—its controller, law-giver, and its king. Yet, we say, how frail is that life on which so much depends. How is the life of the husband and father! When he is taken away who shall fill his place? When he is sick, what gloomy clouds hover over the house! When he is dead, what darkness, weeping, agony. Then poverty, like the murderous assassin, breaks in the window—starvation, like a famishing wolf, howls at the door! Widowhood is too often an associate of sackcloth and ashes. Orphanhood too often means desolation and woe.

A Tidy House.

As a general rule for living neatly and saving time, it is better to *keep clean* than to *make clean*. If you are careful not to drop crumbs of bread or cake on the carpet, you will escape an untidy room, and save the trouble of cleaning it. In working, if you make a practice of putting all the ends of your thread into a division of the work-box, kept for the purpose, and never let one fall on the floor, the room will look very differently at the end of the morning from what it does when this is not attended to. A house is kept far cleaner when all the members of the family are taught to wipe their feet thoroughly on coming in from out of doors, than it can be done where this is neglected. There are a thousand ways of keeping clean and saving labor and time, which are well worth while to learn and practice, and though they may seem to entail trouble, it is not so with any one of refined feelings who regard all labor to secure cleanliness a labor of duty and love.—ABBIE C. MONROE, *in Germantown Telegraph.*

IDLE GIRLS.—It is a painful spectacle, in families where the mother is the drudge, to see the daughters elegantly dressed, reclining at their ease, with their drawing, their music, their fancy work, and their reading, beguiling themselves of the lapse of hours, days and weeks; and never dreaming of their responsibilities, but, as a necessary consequence of neglect of duty, growing weary of their useless lives, laying hold of every newly invented stimulant to rouse their drooping energies, and blaming their fate when they dare not blame their God for having placed them where they are. These individuals will often tell you, with an air of affected compassion, for who can believe it real, that poor, dear mamma is working herself to death; yet no sooner do you propose that they should assist her, than they declare she is quite in her element, in short, that she would never be happy if she had only half as much to do.

DOMESTIC RECIPES.

PICKLING CUCUMBERS.—The following recipes from an exchange are seasonable, and appear practical:

No. 1. Take cucumbers, wipe them clean, and lay them into stone jars. Allow one quart of coarse salt to a pail of water; boil the salt and water till the salt is dissolved; turn it boiling hot on the cucumbers; cover them up tight and let them stand for twenty-four hours; turn them into a basket to drain. Boil as much best cider vinegar as will cover the cucumbers; wash out the jars and put the cucumbers into them; turn the vinegar on boiling hot; cover them with cabbage leaves and cover them tight. In forty-eight hours they will be fit for use.

No. 2. Pick cucumbers each morning, let them stand in weak brine three or four days, putting in mustard pods and horse-radish leaves to keep them green. Then take out and drain, covering with vinegar, for a week; at which time take out and drain again, putting in new vinegar, adding mustard seed, ginger root, cloves, pepper and red pepper pods, of each about one or two ounces, to suit different tastes, for each barrel.

The vinegar must be changed once, as the large amount of water in the cucumber reduces the vinegar so much that this change is absolutely necessary, and if they should seem to lose their sharp taste again, just add a little molasses or spirit, and all will be right.

HARDENING CUCUMBER PICKLES.—A correspondent of the *Country Gentleman*, gives the following direction to keep pickles from becoming soft: "Alum will harden cucumbers. To a gallon of vinegar, add one ounce of powdered alum. If the vinegar is put into bottles tightly corked, and set in a kettle of cold water, with hay or straw between them to keep the bottles from knocking together, and allowed to remain over the fire until the water boils, then removed, and kept in the kettle until nearly cool, the vinegar will keep perfectly clear when used for pickles; but it should be added to them cold. Shreds of horse radish root will prevent all pickles from moulding."

RECIPE FOR COLORING BLUE.—One ounce of potash, 1 tablespoon of copperas, 1 tablespoon oil of vitriol, bring to a boil in a brass kettle. Then put in the goods for twenty-minutes, then rinse in clear warm water. This will do for five pounds of goods.

HOW TO WASH FLANNEL.—Wash in two hot suds, hot as you can bear your hands in comfortably, rinse in scalding, not boiling water, wring dry; dry quick and your flannel will be white, not fulled up, and very soft.

RAISED DOUGHNUTS.—Two cups sugar, 3 cups new milk, 3 tablespoonfuls cream, 3 of yeast, 1 teaspoon saleratus, a little salt; spice with cinnamon or allspice. Let them rise over night in a warm room.

TO TAKE OUT IRON RUST.—Dissolve a little oxalic acid in water and wet the spots with it. Lay the fabric in the sun for a short time and the strains will disappear.

STAINS IN LINEN may be removed by dipping the linen in some buttermilk, drying in the hot sun, then washing in cold water. Repeat the process three or four times, or until the stains are removed.

TO CURE BURNS.—When the skin is not broken apply immediately a mixture of salt and molasses. It is a remedy which every housekeeper has on hand and it works like a charm. For old burns and painful sores I have generally found it superior to anything else.

INK STAINS can frequently be washed out in sweet milk.

USEFUL RECIPES.

HOG CHOLERA.—SYMPTOMS AND CURE.—The first thing that generally directs attention to the disease, is the sudden death of one or more pigs. On a closer inspection the animals are noticed to be dull, caring neither for food or water, creeping beneath the straw or into some dark place; the head is held low, and the ears drooping. Signs of abdominal pain are often well marked, and, as a rule, there is a disposition to lie on the belly. The animals are under some circumstances wild, frantic, or quite unconscious. There is occasionally violent retching or vomiting of food or mucus, and bile. In the early stage, the fæces are of normal consistence; urine, pale; later, diarrhœa sets in, excrements become dark and fetid. The pulse beats from 100 to 120 per minute, the action of the heart being barely perceptible. A staring look, tendency to press on the abdominal organs, rolling about, inability to stand, etc., are indicative of increasing pain. There is a singular jerking or spasmodic breathing in all cases, complicated by congestion of the lungs. A marked weakness of the hind quarters is observed from the commencement of the attack. The animal staggers, its limbs cross each other, and at last are paralyzed. It can not squeal or grunt, and there is a subdued hacking cough. Blood settles in the skin more or less over the whole body, discoloring the skin and mucous membranes, sometime before death. The best cure we have found for this disease is to dissolve thoroughly one pound of copperas in three gallons of warm water, and apply the wash about milk warm to the affected animal, by dipping into the solution or rubbing upon it until the skin is thoroughly wet. Whenever the skin of the hog begins to look rough and scaly, or of a dark red color, apply the wash immediately. Don't wait until the more alarming symptoms (vomiting and purging) set in. Apply the wash every day until the redness is removed.

CONTRACTED FEET.—When a horse has a contracted foot, his shoe should be levelled from the heel about half way to the toe, so that when he sets his foot down the hoof will spread. The frog should not be cut away. His owner must get an old paint keg and fill it half full of urine, and every time he goes in the stable, give the contracted foot a good soaking—especially when the horse comes in from work. If the horse stumbles, his foot must be shortened all that it can be by paring off the toe on the underside, instead of pulling the shoe back and chopping the toe off. Leave the heel a good length, which will take the strain off from the back side of the leg. If the horse continues to stumble, have the toe-cord hammered down flat, and keep a lot of bedding under his fore feet all the time. I have tried this system a number of years, and know that it will afford relief; but a perfect cure I never saw.

LOLLING OUT THE TONGUE.—The reason why a horse carries his tongue out of his mouth is, because the tongue is over instead of under the bit. I cured a mare of mine of this habit, by fixing a wire loop in the joint of the bit, so as to run up into her mouth three and a half to four inches. I also buckled a strap around her mouth close to the bit, so she could not open it wide enough to work her tongue over. I made a complete cure in three or four weeks, and now if the bit is placed under her tongue she will work until she gets it over. All horses carrying their tongues out of their mouths will be found to have them over the bit. Care should be taken in putting the bridle on a colt, to have the tongue under the bit.—*American Stock Journal.*

Periodical application of ashes tends to keep up the integrity of the soil.

RECEIVED.

Report of the General Committee of the Cincinnati Industrial Exposition, held in that city from September 21st to October 22d, 1870, containing four hundred pages.

Rules and Regulations of the Cincinnati Industrial Exposition of Manufactures, Products and Arts, to be held in Cincinnati, commencing Wednesday, September 6th, 1871, to continue until October 7th, 1871; to be held under the auspices of the Board of Trade, Chamber of Commerce, and Ohio Mechanics' Institute. Address H. McCollum, Secretary, Cincinnati, Ohio.

Premium List of the Alabama Agricultural and Mechanical Association Fair of 1871. Premiums amounting to $20,000 will be awarded. Fair to be held at Pickett Springs Park, Montgomery, Ala., beginning Tuesday, October 16th, and closing October 20th. Address Hal T. Walker, Secretary, Montgomery, Alabama.

Rules and Regulations and List of Premiums of the Eleventh Fair of the St. Louis Agricultural and Mechanical Association, to commence Monday, the 2d of October, 1871, to continue six days. Premiums amounting to $40,000 are offered. Competition invited from the whole Union. Address G. O. Kalb, Secretary, St. Louis, Mo.

The Lyceum Magazine for July.—Edited by the Boston Lyceum Bureau, and containing its Third Annual List for the season of 1871-1872. Boston: Redpath & Fall, 36 Bromfield Street.

The Cotton States Mechanics' and Agricultural Fair Association will hold its Second Annual Fair at Augusta, Georgia, commencing Tuesday, October 31st, 1871, and continue five days. Schedule of Premiums and Regulations, to be had of E. H. Gray, Secretary, Augusta, Ga.

The Galaxy—an illustrated magazine, for August—received. The present number fully sustains its high reputation as a standard magazine. Sheldon & Co., New York—price $4 a year.

The Southern Magazine—formerly called the New Eclectic—is received monthly, and richly deserves the support of our people. The editors say: "It will be the constant endeavor of the publishers to make it the exponent of the best Southern talent and culture, and to afford an organ for Southern thinkers, scholars, and men of letters, to communicate with the Southern people. While keeping aloof from partisan politics, it will not abstain from occasionally discussing the great political questions of the day in a calm and impartial spirit; and it will at all times welcome papers containing information respecting the resources and prosperity of the South, or judicious counsel for their development and improvement. No articles of a sectarian character will be admitted; nor will anything of a nature to give just offence to persons of any Christian faith, find a place in its pages." Published by Murdoch, Browne & Hill, Baltimore. Subscription $4.

From E. Moody & Sons, Niagara Nurseries, Lockport, N. Y., Wholesale Trade List for the autumn of 1871.

From Aultman & Taylor Manufacturing Co., Mansfield, Ohio, their beautiful illustrated and descriptive Catalogue of Grain-saving and time-saving Threshing Machines, containing also, an interesting account of various ancient and modern threshing devices. This Catalogue is gotten in a beautiful style of typography, and numerously illustrated.

Scribner's Monthly.—An illustrated magazine for the people. Conducted by J. G. Holland. This popular and standard monthly is published by Scribner & Co., New York. Subscription only $3 a year.

Live Stock Journal.—The July number of this valuable publication marks the commencement of its second volume. It has been somewhat enlarged, making a more shapely page than before. The cover is embellished with an elegant vignette title page; the work is printed in the highest style on fine heavy paper, and handsomely illustrated. The current number contains a large and fine picture of a trio of Buff Cochin fowls; a portrait of the celebrated stallion, Golddust; a picture of a pair of Cheshire swine, and an illustration of the cause of gapes in chickens. Its contents embrace articles on a wide range of topics connected with the subjects of the dairy, horses, cattle, poultry, sheep, swine, bee management, fish culture, a turf record of the month, and other live stock matters. Published by Springer, Best & Co., Buffalo, N. Y.—$1.50 a year.

State Fairs for 1871.

Alabama, Montgomery	Oct. 16, 20
American Institute, New York	Sept. 7, Nov. 2
American Pomological, Richmond, Va.	Sept. 6, 8
Arkansas, Little Rock	Oct. 3, 6
California, Sacramento	Sept. 18, 23
Colorado, Denver	Sept. 12, 16
Cotton States, Augusta, Ga	Oct. 31, Nov. 4
Georgia, Macon	Oct. 23, 26
Illinois, DuQuoin	Sept. 25, 30
Illinois Swine, Chicago	Sept. 19, 21
Indiana, Indianapolis	Oct. 2, 7
Iowa, Cedar Rapids	Sept. 11, 15
Kansas, Topeka	Sept. 11, 15
Louisiana, New Orleans	Nov. 18, 27
Maryland, Baltimore	Oct. 3, 6
Michigan, Kalamazoo	Sept. 19, 22
Michigan Pomological, Grand Rapids	Sept. 12, 15
Minnesota, St. Paul	Sept. 26, 29
Mississippi, Jackson	Oct. 23, 28
Nebraska, Brownville	Sept. 26, 29
New England, Lowell, Mass.	Sept. 5, 8
New Hampshire, Dover	Sept. 26, 29
New Jersey, Waverly	Sept. 19, 23
New York, Albany	Oct. 2, 6
Ohio, Springfield	Sept. 25, 29
Pennsylvania Hort., Philadelphia	Sept. 12, —
St. Louis Association, St. Louis, Mo.	Oct. 2, 7
Tennessee, Nashville	Sept. 26, 30
Vermont, St. Johnsbury	Sept. 12, 15
Virginia, Richmond	Oct. 31, Nov. 3
Virginia Horticultural, Richmond	Sept. 6, 8
Wisconsin, Milwaukee	Sept. 25, 29

Cure for Ague.—We wish to give a very simple remedy for fever and ague, and wish to emphasize it by saying that it has, to our knowledge, proved very efficacious. It is simply common salt. A teaspoonful taken in water, and a teaspoonful deposited inside the stocking next the foot as the chill is coming on. That's all there is of it; but, knowing that it had been efficacious in "breaking" the chill and perfecting a cure, we put it in our editorial columns, where no humbug remedy shall ever find a place, if we know it.—*Cleveland Herald.*

BALTIMORE MARKETS---August 1.

Prepared for the "Maryland Farmer" by **GILLMORE & SON**, Produce Commission Merchants,

194 W. Pratt st.

[*Unless when otherwise specified the prices are wholesale.*]

ASHES.—Pots firm at $7.00@$7.25.

BEESWAX.—Steady at 35@38 cts. for prime; Western and Southern quiet.

BROOM CORN.—Quiet; Red, 3@4 cts.; Green, 6@7 cts.

BUTTER.—Dull; receipts large and in excess of the demand. Prices range from 14@20 cents, the latter for choice in *ash tubs;* same grade in *oak* firkins selliug at 16 cents.

COTTON.—Dull, supply light. There is no demand except from Spinners, who are in the market only for their immediate wants. European accounts give no encouragement to shippers; it is better to sell than to hold.

	Upland.	Gulf.
Ordinary	15 cents.	15¾ cents.
Good ordinary	17	17¾
Low middling	18	19
Middling	20	20¾
Good Middling	21	21¾

COFFEE.—Active; prime to choice, 15@17 cts.

EGGS.—Receipts large; dull market. Fresh, in patent cases, at 17@18 cts.; in Bbls. at 15@16 cts.

FERTILIZERS.—No change to note. We quote:

Peruvian Guano—gold	$68	₹ ton of 2000 lbs	
Orchilla and Rodonda	30	₹ ton	"
Turner's Excelsior	60	₹ ton	"
Turner's Ammo. S. Phos.	50	₹ ton	"
E. F. Coe's Ammo. S. Phos.	55	₹ ton	"
Ober's Phospho-Peruvian Guano	65	₹ ton	"
Ober's Super-Phosphate of Lime	55	₹ ton	"
Soluble Pacific Guano	60	₹ ton	"
Patapsco Guano	60	₹ ton	"
Flour of Bone	60	₹ ton	"
Andrew Coe's Super-phosphate	52	₹ ton	"
Baugh's Raw Bone S. Phos.	50	₹ ton	"
Excellenza Cotton Fertilizer	56	₹ ton	"
Excellenza Soluble Phosphate	56	₹ ton	"
Excellenza Tobacco Fertilizer	60	₹ ton	"
Meat and Bone Guano	40	₹ ton	"
Magnum Bonum Soluble Phos.	52	₹ ton	"
Ruth's "Challenge' Sol. Phos.	60	₹ ton	"
Zell's Raw Bone Phosphate	56	₹ ton	"
Rhodes' do	50	₹ ton	"
Mapes' do	60	₹ ton	"
Bone Dust	45	₹ ton	"
Horner's Bone Dust	45	₹ ton	"
Dissolved Bones	60	₹ ton	"
Baynes' Fertilizer	40	₹ ton	"
"A A" Mexican Guano	30	₹ ton	"
"A" do. do.	30	₹ ton	
Moro Phillips' Super-Phosphate	56	₹ ton	
Whann's Raw Bone Super Phos.	56	₹ ton	
Md. Fertilizing & Manufacturing Co's Ammoniated Super-Phosphate	55	₹ ton	
Fine Ground Bone Phosphates	30	₹ ton	
Plaster	$2.25	₹ bbl.	

FLOUR.—New is coming forward; for *old* the market is dull and prices weak.

City Mills Super	5.00	@	5.25
" Extra	6.50	@	7 00
" Family			$9.50
Howard Street Super	5.00	@	5.50
" " Extra	6.00	@	6.50
" " Family	6.75	@	7.50
Western Super	4.50	@	5.25
" Extra	6.00	@	6.25
" Family	6.50	@	7.50

FRUITS.—*Dried.*—A few lots of Southern have arrived. Select and carefully packed, meet with ready sale; poor is very dull. Cherries, pitted, choice, 18@20 cts.; Blackberries, 8@9 cts. *Green.*—Choice eating apples, $3.50 to $4.00; cooking, $2.50 to $3.50. Peaches 25 cts, to $1.25 per bus. Hale's Early has proved a worthless keeper, and should be banished from the orchard. Of the early varieties we would recommend the Troth and York, Early and Late Crawfords, Susquehannas, Smocks, Heath Cling and Free, are always favorites with shippers and packers. Pears, for eating, $1@$3 per bus. Bartletts take the lead, and every orchard should have a majority of this fruit, as it suits the packers and shippers better than any other variety.

GRAIN.—*Wheat*, active and firm. Maryland Red, common to fair, $1.25@$1.35; good to choice amber, $1.40 to $1 60 *Corn*, White, 75@80 cts.; Yellow, 68@73 cents. *Oats*, drooping; new 50@55 cents.

MILL FEED.—Liberal supply and demand fair; Brownstuffs, 18@20 cts.; Light Middlings, 25@30 cts.; heavy, 35 to 40 cts.

MOLASSES.—Steady; Porto Rico and English Islands, 40@50 cts. per gallon.

PROVISIONS.—Quiet. Shoulders, 8 cts.; Rib Sides, 9 cts., *clean*, 10 cts.; Hams, 15@18 cts.; Lard, 11@12 cts.

POULTRY.—Chickens, small, dull at $1.75@$2.00 per doz.; large, $3.50@$4.00. Old Fowl, $4.50@$5.50 per doz. Ducks, young, $3@$4 per doz.

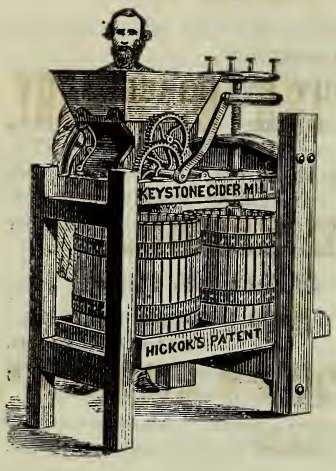
RICE.—Carolina dull at 8@9 cts.

SALT.—Ground Alum, $1.30 to $1.40; Fine $1.90 to $2.00 per sack; Turk's Island, 50 cts. per bushel.

SUGAR.—Firm, active market. Grocery grades: Cuba, 10½@11 cts.; Porto Rico, 11½@12 cts.; Demerara, 12@13 cents.

WHISKEY.—$1.00 per gallon.

THE KEYSTONE CIDER AND WINE MILL



Is so well known, and is so great a favorite, and has been for the past fifteen years, that we hardly feel that it is necessary to say much about it. They are sold from the State of Maine to the Gulf of Mexico, and are looked upon everywhere as the STANDARD MILL of the day. *There is hardly a Mill now made but is taken from the Keystone, and is as near like it as the patents will admit.*

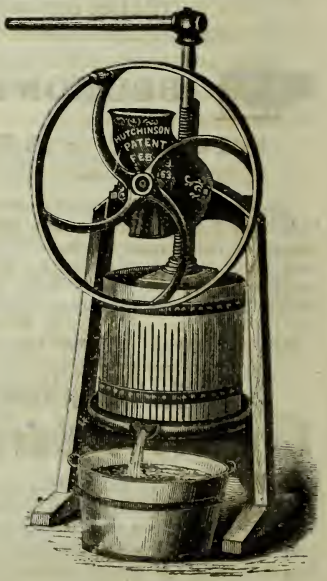
This mill will make twenty five per cent. more cider from the same quantity of apples than any other portable mill in the market, and with more ease, and is much more durable. Price - - - - $40.

E. WHITMAN & SONS,
Manufacturers and Sole Agents for
BALTIMORE, MD.

THE HUTCHINSON CIDER AND WINE MILL.

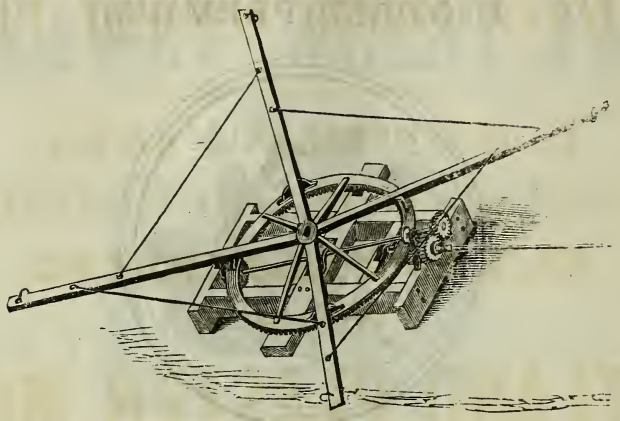
This Mill is used extensively for family use for making Blackberry and other Wines and Cordials, and also for making Cider. For the purposes for which it is designed, viz., a cheap Mill for family use, it has no equal, of which the thousands sold anually are an abundant proof. We have during the last few years sold hundreds of them and can unhesitatingly recommend them.

Price $22.



E, WHITMAN & SONS, Sole Agents for Baltimore, Md

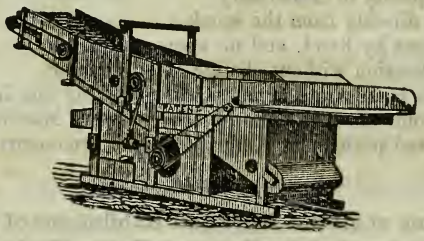
Horse Powers, Threshers & Cleaners.



Whitman's Double Geared Horse Power, (the most substantial power made,)	$ 150 00
Pelton Triple Geared Power, 10 horse	125 00
" " " 8 "	120 00
" " " 6 "	110 00
" " " 4 "	90 00
Whitman's Two Horse Railway Power	165 00
" One " "	130 00
" 24 Inch Premium Iron Cylinder Thresher	80 00
" 20 " " " "	70 00
Straw Carrier for either size Thresher	25 00

WESTINGHOUSE THRESHER & CLEANER,

IN BALTIMORE.



No. 1, 36 Inch Cylinder, for 10 Horse Power	$300 00
2, 30 " " 8 "	285 00
3, 30 " light 4 "	275 00

WHEELER & MELICK THRESHER and CLEANER,

IN BALTIMORE.

34 Inch Cylinder, Weight 1,370 pounds	$275 00
30 " " 1,100 "	250 00
26 " " 1,000 "	240 00

For sale by

E. WHITMAN & SONS,

may-tf

Nos. 145 and 147 W. PRATT STREET, Baltimore, Md.